europass



# Muhammad Aamir Mahmood

**Location:** Vic, Spain

**Nationality:** Pakistani

**Email address:** ms170401186@gmail.com

**100 research projects and tools** • **20 Android apps** Portfolio, pages 7–9

## ABOUT ME

I am a software engineer and independent researcher working on electricity data, forecasting and energy costs. At Speecto Solutions (2021–2025), I built full-stack applications and integrated interfaces, services and databases. My SustainAI-US portfolio brings together 100 public-data studies and software tools, with signed Android apps for 20 of those projects. My published renewable-energy research includes software development and data curation for a Journal of Cleaner Production article.

## EDUCATION AND TRAINING

13/10/2017 – 06/04/2020 Lahore, Pakistan

### MASTER OF SCIENCE IN COMPUTER SCIENCE (2 YEAR PROGRAM) Virtual University of Pakistan

Specialization: Software Engineering. Main subjects covered: Theory of Computation, Software Architecture, Mobile and Wireless Computing, Software Design, Software Process Improvement, Software Quality Assurance, Software Requirement Engineering, Distributed DBMS, and Advanced Algorithms Analysis and Design. Skills developed: software design, software quality assurance, process improvement, requirements engineering, database systems, mobile computing, software architecture, and algorithmic problem solving. This was a 30 credit hours program. Obtained CGPA: 3.10/4.00. Obtained marks: 724.50/1000. Obtained percentage: 72.45%.

**Level in EQF** EQF level 7

08/10/2015 – 29/09/2017 Lahore, Pakistan

### MBA (EQUIV. TO MS) 2 YEARS PROGRAM Virtual University of Pakistan

Specialization: Marketing. Main subjects covered: Corporate Finance, Strategic Management, Advanced Research Methods, Strategic Marketing Management, Services Marketing, International Marketing, Brand Management, Consumer Behaviour, Project Management, and Knowledge Management. Skills developed: strategic marketing, brand management, consumer behaviour analysis, research methods, finance, project management, and knowledge management. This was a 30 credit hours program. Obtained CGPA: 3.14/4.00. Obtained marks: 730.50/1000. Obtained percentage: 73.05%.

**Level in EQF** EQF level 7

28/07/2014 – 27/07/2016 Islamabad, Pakistan

### MASTER OF COMPUTER SCIENCE (2 YEARS PROGRAM) COMSATS Institute of Information Technology, Virtual Campus

Main subjects covered: Introduction to Computing, Discrete Structures, Introduction to Computer Programming, Database Systems, Report Writing Skills, Data Structures, Computer Organization and Assembly Language, Object Oriented Programming, Software Engineering, Automata Theory, Operating Systems Concepts, Communication and Networks, Management Information Systems, Software Engineering II, Enterprise Systems Development, Computer Architecture, Computer Graphics, Compiler Construction, Artificial Intelligence, Software Project Management, and Project. Skills developed: programming, software development, database design, systems analysis, networking, artificial intelligence, and technical report writing. This was a 2 years program. Credit hours registered: 77. Net credit hours passed: 73. Obtained CGPA: 3.00/4.00. Obtained aggregate weighted percentage: 76.16%.

**Level in EQF** EQF level 6

11/10/2013 – 29/09/2015 Lahore, Pakistan

### **MASTER OF BUSINESS ADMINISTRATION EXECUTIVE (2 YEAR PROGRAM)** Virtual University of Pakistan

Main subject/occupational skills covered
Specialization: Management. Main subjects covered: Business Finance, Introduction to Computing, Financial Accounting, Introduction to Business, Principles of Management, Business Mathematics and Statistics, Business Communication, Financial Management, Principles of Marketing, Cost and Management Accounting, Organizational Behaviour, Research Methods, Information Systems, Economics, Leadership and Team Management, Human Resource Management, Total Quality Management, Marketing Management, Managerial Economics, Change Management, Knowledge Management, Entrepreneurship, Strategic Management, and Final Project. Skills developed: management, finance, accounting, business communication, research, information systems, leadership, human resource management, quality management, marketing, economics, change management, and strategic planning. This was a 72 credit hours program. Obtained CGPA: 3.37/4.00. Obtained marks: 1746/2300. Obtained percentage: 75.92%.

**Level in EQF** EQF level 6

13/04/2020 – 27/10/2021 Lahore , Pakistan

### **BACHELOR OF EDUCATION, B.ED. SECONDARY (1.5-YEAR)** Virtual University of Pakistan

Specialization: ICT in Education. Main subjects covered: General Methods of Teaching, Curriculum Development, Critical Thinking and Reflective Practice, ICT in Education, Philosophy of Education, Educational Leadership and Management, Cyber Law, Human Computer Interaction, Human Development and Learning, Contemporary Issues and Trends in Education, Test Development and Evaluation, Professionalism in Teaching, Research Methods, Research Project, Information Systems, Technology and Pedagogy for Learning Problems, and Teaching Practice. Skills developed: teaching methodology, curriculum design, digital learning integration, classroom assessment, educational research, instructional planning, leadership in education, and teaching practice. This was a 54 credit hours program. Obtained CGPA: 3.26/4.00. Obtained marks: 1259/1700. Obtained percentage: 74.03%.

**Level in EQF** EQF level 6

12/10/1998 – 18/05/2002 Bahawalpur, Pakistan

### **MASTER OF ARTS IN HISTORY AND PAKISTAN STUDIES (2 YEARS PROGRAM)** The Islamia University of Bahawalpur

Main subject/occupational skills covered
Specialization: History and Pakistan Studies. Main subjects covered: Philosophy of History and Research Methodology, History of India to 1206 A.D., Muslim Rule in India 1206 to 1526 A.D., Muslim Rule in India 1526 to 1707 A.D., Age of the Europeans and the Decline and Fall of Muslim Rule in India to 1858 A.D., Muslim Struggle for Independence and the Birth of Pakistan, Politics in Pakistan 1947 to 1977, Socio Economic and Constitutional Development in Pakistan, Studies of History of the Mughal Era, History of the Ottoman Empire, and Essay. Skills developed: historical analysis, research methodology, Pakistan studies, constitutional understanding, political analysis, and academic writing. Obtained marks: 463/1000. Obtained division: Second Division.

**Level in EQF** EQF level 6

25/09/1996 – 24/09/1998 Bahawalpur, Pakistan

### **BACHELOR OF ARTS (2 YEARS PROGRAM)** The Islamia University of Bahawalpur

Main subject/occupational skills covered
Main subjects covered: English, Islamiat and Pakistan Studies, Punjabi, Urdu, and Persian. Skills developed: academic writing, language proficiency, cultural understanding, and basic humanities analysis. This was an old conventional 2 years program. Obtained marks: 412/800. Obtained percentage: 51.50%. Obtained division: Second Division.

**Level in EQF** EQF level 5

31/12/1994 – 03/10/1997 Faisalabad, Pakistan

### **INTERMEDIATE (ANNUAL) EXAMINATION, GROUP SCIENCE (PRE-ENGINEERING)** Board of Intermediate and Secondary Education, Faisalabad

Main subject/occupational skills covered
Group Science (Pre-Engineering). Main subjects covered: Urdu, English, Islamic Education, Pakistan Studies, Physics, Chemistry, and Mathematics. Skills developed: analytical thinking, quantitative reasoning, science foundation, mathematics, and problem solving. This was an old conventional 2 years program. Obtained marks: 557/1100. Obtained percentage: 50.64%. Obtained grade: C.

**Level in EQF** EQF level 4

16/12/1992 – 15/12/1994 Faisalabad, Pakistan

**SECONDARY SCHOOL CERTIFICATE (SUPPLEMENTARY) EXAMINATION, GROUP SCIENCE** Board of Intermediate and Secondary Education, Faisalabad

Main subject/occupational skills covered
Group Science. Main subjects covered: Urdu, English, Islamiyat, Pakistan Studies, Mathematics, Physics, Chemistry, and Biology. Skills developed: general science foundation, mathematics, language skills, and basic analytical skills. This was an old conventional 2 years program. Obtained marks: 526/850. Obtained percentage: 61.88%. Obtained grade: B.

**Level in EQF** EQF level 3

## WORK EXPERIENCE

**SOFTWARE ENGINEER – SPEECTO SOLUTIONS** – 25/09/2021 – 28/08/2025 – FAISALABAD , PAKISTAN

**Location:** Faisalabad, Pakistan

Developed robust and scalable software applications using modern full-stack technologies. Wrote efficient, maintainable, and well-documented code across the entire development lifecycle. Collaborated closely with cross-functional teams, including product managers and developers, to ensure seamless project execution from requirements gathering to deployment. Designed and integrated front-end interfaces, back-end services, and databases to deliver high-quality, data-driven digital solutions. Troubleshot technical issues, performed debugging and performance optimization, and contributed to system architecture decisions. Applied machine learning and artificial intelligence techniques where applicable to enhance analytics, automation, and decision-support features. Utilized a range of programming tools and development environments to support continuous integration, testing, and delivery.

**BUSINESS RESEARCH SCIENTIST – INDEPENDENT** – 01/01/2013 – Current – FAISALABAD, PAKISTAN

Conducts interdisciplinary research at the intersection of artificial intelligence, software engineering, business analytics, and socioeconomic systems. Develops AI-driven models for sustainability, digital transformation, and decision support. Applies machine learning, process mining, and econometric methods to analyses organizational, economic, and environmental data. Publishes in peer-reviewed journals and book chapters on topics such as green economy, federated learning, leadership, and circular economy. Combines technical development with strategic analysis to support evidence-based governance and innovation.

**COLLEGE PRINCIPAL – PAKISTAN ACADEMY 189RB RASOOL PUR FAISALABAD** – 01/07/2002 – 31/07/2017 – FAISALABAD, PAKISTAN

Directed the academic and administrative operations of the academy. Led strategic planning, curriculum development, and quality assurance initiatives. Supervised and mentored teaching staff, managed student affairs, and ensured effective resource allocation. Implemented institutional policies to enhance educational delivery and operational efficiency. Fostered a collaborative environment to support both staff development and student achievement.

## SKILLS

Programming & Development | Full-stack development, Android development, Python, Java, Kotlin, Database design, Oracle Database | MongoDB, Software architecture, Network modeling, Web development | AI & Data Science | Machine learning, Deep learning, Federated learning, Process mining, Text analytics | Data science, Artificial intelligence, Predictive modeling, Computational modeling, MATLAB | Research & Analytics | Econometrics, Statistical analysis, SPSS, STATA, EViews, SmartPLS, Mixed methods research | Academic writing, Peer review, Policy analysis, Project management, Strategic planning, Leadership

## LANGUAGE SKILLS

**Urdu** Native language

**English** Used for academic publications, technical documentation and peer review.

## PUBLICATIONS

17 matched records · 1 chapter attribution under review

2024

### Green economy transition in Asia Pacific: A holistic assessment of renewable energy production Year: 2024

**Contribution: software and data curation.**

Lin, Y., Mahmood, M. A., Meng, W., & Ali, Q. (2024). Green economy transition in Asia Pacific: A holistic assessment of renewable energy production. Journal of Cleaner Production, 437, 140648.

**Authors**: Yi Lin, Muhammad Aamir Mahmood, Wentao Meng, Qamar Ali | **Journal Name**: Journal of Cleaner Production | **Volume, Issue and Pages**: Vol. 437, 140648 | **Publisher**: Elsevier

2025

### Strategies for sustainable urban development: Assessing the impact of adaptation readiness, nanotechnology, and renewable energy on urban ecosystems

Journal article · DOI 10.1111/1477-8947.12446

Li, J., Han, W., & Mahmood, M. A. (2025). Strategies for sustainable urban development: Assessing the impact of adaptation readiness, nanotechnology, and renewable energy on urban ecosystems. Natural Resources Forum, 49(3), 2536–2560.

Authors: Jiali Li, Weiqun Han, Muhammad Aamir Mahmood | Natural Resources Forum | Wiley
Vol. 49, issue 3, pp. 2536–2560.

2024

### How Can the Blue Economy Contribute to Inclusive Growth and Ecosystem Resources in Asia? A Comparative Analysis

**Contribution: analysis, visualisation and original drafting (shared).**

Geng, B., Wu, D., Zhang, C., Xie, W., Mahmood, M. A., & Ali, Q. (2024). How Can the Blue Economy Contribute to Inclusive Growth and Ecosystem Resources in Asia? A Comparative Analysis. Sustainability, 16(1), 429.

Authors: Biao Geng, Daoning Wu, Chengshu Zhang, Wenbao Xie, Muhammad Aamir Mahmood, Qamar Ali
Sustainability | Vol. 16, issue 1, article 429 | MDPI.

2026

### A Hybrid Semantic AI Architecture for Real-Time Environmental Intelligence: Integrating Knowledge Graphs, Reproducible Workflows, and Adaptive Decision Systems for Earth Data

SSRN preprint.

Mahmood, M. A. (2026). A Hybrid Semantic AI Architecture for Real-Time Environmental Intelligence. SSRN, 42.

**Authors**: Muhammad Aamir Mahmood | **Journal Name**: SSRN | **Publisher**: Elsevier

### Building Resilience: Addressing the Economic, Social, and Environmental Impacts of Natural Disasters in a Changing Climate

Scholarly book chapter.

Mahmood, M. A. (2026). Building Resilience: Addressing the Economic, Social, and Environmental Impacts of Natural Disasters in a Changing Climate. In Strengthening Global Resilience to Natural Disasters (pp. 231-242). IGI Global.

**Authors**: Muhammad Aamir Mahmood | **Journal Name**: Strengthening Global Resilience to Natural Disasters | **Volume, Issue and Pages**: pp. 231-242 | **Publisher**: IGI Global Scientific Publishing

2026

### Understanding Smog

Scholarly book chapter.

Ali, Q., Mahmood, M. A., & Ashfaq, M. (2026). Understanding Smog. In Global Trends in Smog and Air Pollution Control (pp. 1-26). IGI Global.

**Authors**: Qamar Ali, Muhammad Aamir Mahmood, M. Ashfaq | **Journal Name**: Global Trends in Smog and Air Pollution Control | **Volume, Issue and Pages**: pp. 1-26 | **Publisher**: IGI Global Scientific Publishing

2026

## Smog and Sustainable Development Goals: An Integrated Assessment Framework

Scholarly book chapter.

Ali, Q., Mahmood, M. A., & Ashfaq, M. (2026). Smog and Sustainable Development Goals: An Integrated Assessment Framework. In Global Trends in Smog and Air Pollution Control (pp. 57-76). IGI Global.

**Authors**: Qamar Ali, Muhammad Aamir Mahmood, M. Ashfaq | **Journal Name**: Global Trends in Smog and Air Pollution Control | **Volume, Issue and Pages**: pp. 57-76 | **Publisher**: IGI Global Scientific Publishing

2025

## Transforming Leadership: The Role of Artificial Intelligence in Modern Organizational Management

Scholarly book chapter.

Ali, Q., & Mahmood, M. A. (2025). Transforming Leadership: The Role of Artificial Intelligence in Modern Organizational Management. In Reshaping Organizational Management and Workplace Culture With AI (pp. 223-262). IGI Global.

**Authors**: Qamar Ali, Muhammad Aamir Mahmood | **Journal Name**: Reshaping Organizational Management and Workplace Culture With AI | **Volume, Issue and Pages**: pp. 223-262 | **Publisher**: IGI Global Scientific Publishing

2025

## An Explainable Adaptive Framework for Integrated Earth-System Hydrological Forecasting: Bridging Complex Adaptive Systems, Artificial Intelligence, and Governance for Climate Resilience (2000–2025)

Mahmood, M. A. (2025). An Explainable Adaptive Framework for Integrated Earth-System Hydrological Forecasting: Bridging Complex Adaptive Systems, Artificial Intelligence, and Governance for Climate Resilience. SSRN Preprint, Elsevier.

**Authors**: Muhammad Aamir Mahmood | **Journal Name**: SSRN (Elsevier) | **Publisher**: Elsevier

2025

## The Intersection of Digitalization and Circular Economy: Advancing Sustainable Development and Climate Change Mitigation

Publisher byline: Qamar Ali and Muhammad Aamir Aamir. The chapter appears on Muhammad Aamir Mahmood's author profile. Confirmation of the credited name is pending. Excluded from the 17 matched works.

Effects of Digitalization and Circular Economy on Sustainable Policy and Climate Change Prevention, pp. 97–116. IGI Global Scientific Publishing. DOI 10.4018/979-8-3693-9909-5.ch004.

2024

## The Impact of Climate Change, Environment, and Health Worker Density Index on Road Accident Fatalities: Evidence from Top Ten Pollution Emitting Countries

Journal article.

Wang, C., Wang, F., Mahmood, M. A., & Ali, Q. (2024). Impact of Climate Change, Environment, and Health Worker Density on Road Fatalities: Evidence from Top Ten Polluting Countries. Pol. J. Environ. Stud., 33(4).

**Authors**: C. Wang, F. Wang, Muhammad Aamir Mahmood, Qamar Ali | **Journal Name**: Polish Journal of Environmental Studies | **Volume, Issue and Pages**: Vol. 33, Issue 4 | **Publisher**: HARD Publishing

2024

## Economic and Social Impact of Tuberculosis on Health-Related Quality of Life (HRQOL) in Pakistan

Journal article.

Muzaffar, N., Mahmood, M. A., Ali, Q., Kousar, R., & Yaseen, M. R. (2024). Economic and social impact of tuberculosis on health-related quality of life (HRQOL) in Pakistan. Kurdish Studies, 12(5), 1347–1353.

Authors: Nabila Muzaffar, Muhammad Aamir Mahmood, Qamar Ali, Rakhshanda Kousar, Muhammad Rizwan Yaseen
Kurdish Studies | Vol. 12, issue 5, pp. 1347–1353 | DOI 10.53555/ks.v12i5.3341.

2023

## Application of Convolutional Neural Networks for Forecasting 1p/19q Co-Deletion Status in Lower Grade Glioma Patients

Journal article.

Mahmood, M. A., Ali, Q., & Fatima (2023). Application of Convolutional Neural Networks for Forecasting 1p/19q Co-Deletion Status in Lower Grade Glioma Patients. International Review of Basic and Applied Sciences, 11(2).

**Authors**: Muhammad Aamir Mahmood, Qamar Ali, Fatima | **Journal Name**: International Review of Basic and Applied Sciences | **Volume, Issue and Pages**: Vol. 11, Issue 2 | **Publisher**: Academy of IRMBR

2023

## Enhancing Tourist Experience through Machine Learning: A Data-Driven Approach

Journal article.

Reference: Ali, Q., Mahmood, M. A., & Ahmed (2023). Enhancing Tourist Experience through Machine Learning: A Data-Driven Approach. International Review of Basic and Applied Sciences, 11(2).

**Authors**: Qamar Ali, Muhammad Aamir Mahmood, Ahmed | **Journal Name**: International Review of Basic and Applied Sciences | **Volume, Issue and Pages**: Vol. 11, Issue 2 | **Publisher**: Academy of IRMBR

2024

## Co-Optimizing Ecological Buffering, Algorithmic Transparency, and Infrastructural Fortification: A Pioneering AGNN-Transformer Hybrid for Urban Poly-Crisis Resilience via High-Fidelity Spatio-Temporal Intelligence

Journal article.

Mahmood, M. A., Mohsin, Asif, & Usman (2024). Co-Optimizing Ecological Buffering, Algorithmic Transparency, and Infrastructural Fortification: A Pioneering AGNN-Transformer Hybrid for Urban Poly-Crisis Resilience. Int. Rev. Basic Appl. Sci., 12(3).

**Authors**: Muhammad Aamir Mahmood, Mohsin, Asif, Usman | **Journal Name**: International Review of Basic and Applied Sciences | **Volume, Issue and Pages**: Vol. 12, Issue 3 | **Publisher**: Academy of IRMBR

2025

## Leveraging Strategic Capabilities for Brand Trust and Marketing Performance: A Cross-Cultural, Mixed-Methods Analysis of AI, Analytics, Agility, Customer-Centricity, and Sustainability

Journal article.

Mahmood, M. A. (2025). Leveraging Strategic Capabilities for Brand Trust and Marketing Performance. International Review of Management and Business Research, 14(3).

**Authors**: Muhammad Aamir Mahmood | **Journal Name**: International Review of Management and Business Research | **Volume, Issue and Pages**: Vol. 14, Issue 3 | **Publisher**: Academy of IRMBR

2025

## Building Consumer Trust to Drive Green Purchases: An Evidence-Based Framework for Managers in Cross-Cultural Markets

Journal article.

Mahmood, M. A., & Zulqarnain (2025). Building Consumer Trust to Drive Green Purchases. International Review of Management and Business Research, 14(2).

**Authors**: Muhammad Aamir Mahmood, Zulqarnain | **Journal Name**: International Review of Management and Business Research | **Volume, Issue and Pages**: Vol. 14, Issue 2 | **Publisher**: Academy of IRMBR

2025

## Parental Self-Efficacy and Cultural Context as Mechanisms of Speech and Language Development: A Cross-Cultural Mixed Methods SEM–NVivo Integration in Pakistan, China, and Spain

Journal article.

Idrees, Niazi, Mustafa, & Mahmood, M. A. (2025). Parental Self-Efficacy and Cultural Context as Mechanisms of Speech and Language Development. International Review of Social Sciences, 13(4).

**Authors**: Idrees, Niazi, Mustafa, Muhammad Aamir Mahmood | **Journal Name**: International Review of Social Sciences | **Volume, Issue and Pages**: Vol. 13, Issue 4 | **Publisher**: Academy of IRMBR

**SUSTAINAI-US RESEARCH SOFTWARE**

## 100 projects and tools with 20 signed Android apps

The private portfolio covers 50 original energy studies, five data science projects, five defensive cybersecurity tools, 14 energy data engineering projects, 13 energy GIS projects and 13 energy economics and utility regulation projects.

### California electricity demand / P02

Compared the California grid operator's archived day-ahead demand forecasts with reported demand. The July–December 2025 release contains 4,417 hourly records. Across 4,368 usable forecast–demand pairs, mean absolute error was 2,165.798 MW.

Public data: EIA hourly grid records

### New York public housing electricity bills / P36

Reconciled billed charges for the same seven meters in July and December 2024 at NYCHA's Adams development. Fourteen bills totalled $135,898.54 in July and $83,978.39 in December. The $51,920.15 difference measures the change between billed totals.

Public data: NYCHA electricity consumption and costs

### Software verification

The internal review checked the primary evidence for all 100 projects. Across the 50 original study readers, desktop and mobile-layout checks covered interaction and CSV export. The review also checked 105 headline metrics against their tables.

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**SCHOLARLY BOOK EDITING**

### Revolutionizing Transportation Safety With AI

Co-editor with Qamar Ali and Muhammad Tariq Iqbal Khan. IGI Global Scientific Publishing.

Bibliographic record · ISBN 9798337332314

## PEER REVIEW AND EDITORIAL SERVICE

**Elsevier Reviewer Hub - completed manuscript review reports (2026)**

40 completed reports across four Elsevier journals, including review of revised manuscripts.

| | |
|---|---|
| **Information Sciences**<br>Machine learning, AI, software systems and applied information sciences | **34 completed review reports** |
| **Environmental Development**<br>Environmental policy, ecological footprint, innovation and sustainability | **4 completed review reports** |
| **Ecological Economics**<br>Environmental and behavioural economics | **1 completed review report** |
| **Earth System Governance**<br>Energy infrastructure, sustainability and governance | **1 completed review report** |

**Additional peer-review contributions - Wiley and Emerald Publishing**

**Natural Resources Forum (Wiley)**
Completed review acknowledged by the editor - 19 August 2024

**Kybernetes (Emerald Publishing)**
Completed review acknowledged by the journal - 4 August 2024

**Environmental Quality Management (Wiley)**
Earlier review acknowledged in a revised-manuscript invitation - 5 November 2026

## RESEARCH REVIEW COMPETENCIES

Critical assessment of research originality, scholarly contributions and literature gaps.
Evaluation of quantitative and qualitative methods, model design, data analysis and robustness.
Technical and editorial feedback on interdisciplinary research in AI, business and sustainability.

Evidence: Elsevier Reviewer Hub histories/certificates and Wiley/Emerald editorial acknowledgments.
Review counts refer to completed reports, including revision rounds; not necessarily distinct manuscripts.

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# Research project index

100 studies and tools in the SustainAI-US portfolio. Project IDs follow the release index.

| | |
|---|---|
| P01 | EIA State Electricity Sales, Revenue and Rates |
| P02 | Operator Demand Forecast Error |
| P03 | NOAA Storm Events records and electricity outage duration |
| P04 | Reported Residential Electricity Bills |
| P05 | Forecast Error Under High Forecast Demand |
| P06 | Reported Generation by Fuel |
| P07 | Reported Solar Generation by Hour of Day |
| P08 | Reported Battery Net Generation |
| P09 | Reported Long Ridge Generation and CO2 Rates |
| P10 | Observed Airport Temperature and Electricity Demand |
| P11 | Public charging-port counts from AFDC state records |
| P12 | Reported Net-Metered Photovoltaics |
| P13 | 2020 Household Heating Equipment Survey Estimates |
| P14 | FEMA County Population and Geographic Matching |
| P15 | Reported Interregional Electricity Exchange |
| P16 | Observed Generator Events Among Earlier Plan Cohorts |
| P17 | Reported Demand Response Enrollment |
| P18 | Metered IT Electricity at New York City Data Centres |
| P19 | Utility Reliability and Reported Residential Electricity Prices |
| P20 | Archived U.S. Utility-Scale Generation Values |
| P21 | Reported ERCOT Active Queue Requests |
| P22 | Reported Thermoelectric Cooling Water by Reporting Layer |
| P23 | Utility-reported annual electricity savings |
| P24 | CAISO Solar and Wind Generation Telemetry |
| P25 | Monongahela's filed distribution-plant balances |
| P26 | Advanced Metering Coverage |
| P27 | Building Electricity Benchmarking |
| P28 | State Transmission and Distribution Loss Accounting |
| P29 | Reported Wind Construction Costs |
| P30 | Residential solar prices in Berkeley Lab's 2025 public file |
| P31 | Industrial Combined Heat and Power Inventory |
| P32 | Domestic densified biomass fuel sales and prices |
| P33 | Power Plant Fuel Delivery Cost and Coverage Monitor |
| P34 | Electricity Workforce Occupational Wage Benchmarks |
| P35 | Irrigation Pumping Energy Expense Benchmarks |
| P36 | Electricity bills and tariff charges for NYCHA's ADAMS records |
| P37 | Heat Pump Import Sourcing Concentration |
| P38 | Federal Electricity Procurement Obligations Explorer |
| P39 | Published manufacturing electricity prices and sampling errors |
| P40 | Voluntary Green Power Procurement Mix Benchmarks |
| P41 | Landfill Methane Recovery Candidate Screen |
| P42 | Turbines in the U.S. Wind Turbine Database |
| P43 | Seasonal Generation at Completed Hydropower Retrofits |
| P44 | Energy installations in EPA's RE-Powering tracking matrix |
| P45 | Geothermal Direct-Use Heat Project Comparables |
| P46 | U.S. Nuclear Fleet Availability Benchmark |
| P47 | Regional Working-Gas Storage Reconciliation |
| P48 | ENERGY STAR commercial electric fryer laboratory ratings |
| P49 | Observed New England Zonal Prices and Load Obligations |
| P50 | Seller-reported monthly wholesale power transactions |
| DS01 | DOE grid cyber reports |
| DS02 | State electricity generation mix |
| DS03 | Residential electricity prices |
| DS04 | Texas cooling conditions and ERCOT peak load |
| DS05 | Public and private EV charging growth |
| CY01 | Release integrity |
| CY02 | Dependency advisory review |
| CY03 | Android release manifest permission review |
| CY04 | Institutional bill data minimization |
| CY05 | Metadata-only ZIP intake |
| P061 | Grid data revision tracker |
| P062 | Clock-safe grid hour keys |
| P063 | Hourly reporting gap episodes |
| P064 | Reported-to-adjusted value lineage |
| P065 | Balancing-authority energy reconciliation |
| P066 | Fuel-column schema crosswalk |
| P067 | Interchange reporting agreement |
| P068 | Utility identity change log |
| P069 | Balancing-authority reference join |
| P070 | Utility merger filing event register |
| P071 | Distribution circuit schedule coverage |
| P072 | Electricity disposition arithmetic audit |
| P073 | Dynamic-pricing program combinations |
| P074 | Delivery-company unit normalization |
| P075 | County public charging-port density |
| P076 | Population-weighted access to fast charging |
| P077 | Geographic backup for DC fast-charging locations |
| P078 | Interchange fast-charging inventory |
| P079 | Park-and-ride Level 2 inventory reconciliation |
| P080 | Fast charging and designated EV corridors |
| P081 | State-border sensitivity of fast-charging access |
| P082 | County power plant capacity per unit of land |
| P083 | Geographic centers of power generation capacity by fuel |
| P084 | Plant coordinate changes between annual EPA releases |
| P085 | County reference-point proximity to wind and solar plants |
| P086 | Contiguous county groups by leading power plant fuel |
| P087 | Geographic concentration of eGRID-adjusted power plant CO2 |
| P088 | First-year electric distribution revenue decisions |
| P089 | Authorized returns on equity and performance adjustments |
| P090 | FERC enforcement settlement remedies |
| P091 | Carbon allowance auction receipts and reserve sales |
| P092 | Federal home energy assistance allocation |
| P093 | PJM capacity auction price spreads |
| P094 | Sector contributions to energy spending as a share of GDP |
| P095 | Residential distillate and natural gas prices per unit of energy |
| P096 | Landed and free-on-board costs of U.S. crude oil imports |
| P097 | Calendar-month patterns in regular gasoline prices |
| P098 | Volatility of coal and gas receipt costs at U.S. power plants |
| P099 | Consumption coverage of published U.S. natural gas prices |
| P100 | Value of international electricity trade with Canada and Mexico |

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# Android applications

20 signed, offline APKs. Each application presents data and results from one project in the index.

## Electricity forecasting and billing

**P02** **California Load Forecasts**
Compare archived California day-ahead forecasts with reported demand.

**P36** **NYC Housing Bill Check**
Recalculate electricity charges for 14 institutional bills at NYCHA's Adams development.

## Energy data engineering

**P062** **Grid Clock**
Identify repeated local hours using the corresponding UTC timestamps.

**P067** **Interchange Desk**
Check differences between total interchange and exchanges with neighbouring grids.

**P070** **Merger Ledger**
Find utility consolidation filings by company, event date and survey year.

**P071** **Circuit Register**
Match distribution circuit schedules to the utilities in the annual survey.

**P073** **Pricing Mix**
Compare combinations of dynamic-pricing programmes across four sectors.

**P074** **Delivery Units**
Trace revenue, energy and customer measures to their source cells.

## Energy GIS

**P075** **VT Port Atlas**
Explore public charging-port coverage by Vermont county.

**P079** **Park & Ride Fieldbook**
Match park-and-ride locations with nearby Level 2 chargers.

**P081** **Border Charge Lens**
Measure how state boundaries change the distance to a fast charger.

**P082** **County Power Compare**
Compare county generating capacity and capacity per unit of land.

**P085** **Wind & Solar Locator**
Find the nearest recorded wind and solar power plants.

**P087** **Carbon Concentration Lab**
Explore the geographic concentration of reported power-plant emissions.

## Energy economics and regulation

**P088** **Rate Case Ledger**
Compare requested and approved first-year revenue in two distribution rate cases.

**P091** **Carbon Auction Explorer**
Review quarterly RGGI carbon allowance prices, reserve sales and proceeds.

**P092** **Energy Assistance Mix**
Compare seven uses of federal home energy assistance funds.

**P093** **Capacity Auction Monitor**
Compare constrained PJM capacity areas with the regional auction price.

**P099** **Price Coverage Atlas**
Check how much consumption is represented by published natural gas prices.

**P100** **Power Trade Balance**
Trace the value of U.S. electricity imports and exports by state and year.

## Android verification

All 20 APKs passed internal checks for signature, package identity, alignment and embedded data. Android 15 emulator tests covered installation and native browsing. The 20 native datasets contain 11,671 searchable entries, including summary records.