

Pham Quang Bach



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About me



Data Science Master's student at Aalto University with strong foundations in machine learning, statistics, and advanced analytics. Experienced in applying data science methods to real-world problems.

Skilled at translating complex data into clear insights and communicating results to diverse audiences. Passionate about using data science to solve impactful business and societal challenges, with a strong bias toward building practical, end-to-end solutions.

Technical Skills



Languages:

- C#, C, Python, SQL, JavaScript, R

Data Science:

- Machine learning, Statistical modeling, Multivariate analysis
- Predictive modeling, Classification, Feature engineering, Model evaluation

Data Visualization:

- Power BI, Data storytelling, Exploratory data analysis

Tools:

- AWS services (Lambda, S3, Glue, Athena, ...)
- Git, Jupyter Notebook

Other:

- ETL/ELT Data pipelines, Research-oriented analysis

Education



Aalto University

MSc in Machine Learning, Data Science and AI (Expected 2027)

GPA: 4.5

BSc in Data Science (2025)

GPA: 4.72

Soft skills



- Analytical thinking & problem solving
- Curious and open-minded
- Collaboration & teamwork
- Ownership & initiative
- Actively learning and improving

Experiences

Projects



Automated Energy Grid Data Pipeline | AWS, Python, SQL

- Designed and deployed a serverless ETL pipeline to ingest real-time energy generation data from the Fingrid API and real-time weather data from Meteo API.
- Architected a metadata catalog using AWS Glue and implemented an analytics layer with Amazon Athena.
- Implemented IAM least-privilege security policies and CORS configurations to allow secure cross-origin communication between the frontend and AWS backend.
- Developed a professional Power BI dashboard featuring custom DAX measures to monitor national grid load and renewable generation.
- Live Demo: phamquangbach.github.io

Economic Forecasting with Machine Learning in Collaboration with OP Group

- Developed predictive models for Finnish regional economic indicators using statistical and ML methods
- Analyzed complex datasets to identify key economic drivers and trends
- Translated model outputs into actionable insights for financial decision-making
- Presented findings to course partners clearly through visualizations and structured reporting

Student Stress Factor Analysis

- Applied Multiple Correspondence Analysis to identify relationships between lifestyle factors and stress levels
- Simplified complex statistical relationships into clear, interpretable insights
- Demonstrated ability to connect data analysis with real-world behavioral implications

Full portfolio: <https://phamquangbach.github.io/>

Work experience



Freelance Game Developer – HypeHype (2023–2026)

- Developed game systems using structured, modular code in a team environment
- Collaborated with developers and designers to deliver stable, functional features
- Investigated and resolved bugs by analyzing system behavior and edge cases

Volunteering at major events (Junction, Helsinki Coffee Festival, Pocket Gamer Connect)

- Developed strong communication and problem-solving skills
- Assisted diverse stakeholders in fast-paced environments