Babäk Firoozi Fooladi

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Data Analytics Engineer | Data Engineer

I see data as a river flow, which we experts in the realm of data change its path and direction. I'm a problem solver who takes pride in being adaptable and eager to learn new skills. My background includes spatial data, GIS, econometrics, statistics, and data science, and I'm continuously expanding my knowledge in data processing and visualisation. I strive to develop analytical solutions for various challenges, and I'm keen to pursue opportunities that will allow me to grow further in data engineering and data science.

Data Analytics Engineer | Data Engineer | Researcher

I am a service-minded, flexible and curious problem solver who can master new abilities and adjust to new environments. I have mastered time-series and time related statistical and machine learning models. I am service minded and can effectively provide data analysis, solutions and insights for the business needs. I leverage my experience in production environment, can-do attitude and fast learning capabilities to adapt to any environemnt, produce tailor made solutions with high quality standards, and deliver results in a timely manner. I have a strong foundation in data science, machine learning, econometrics and statistical modelling which I apply to solve complex problems.

Technical Skills

Skill	Level		Skill	Level		Skill	Level		Skill	Level
Python:	●●●		R:	●●●●		Julia:	●●		STATA:	●●●●
AZURE:	●●		Econometric:	●●●●		Data Viz.:	●●●●●		Spatial data:	●●●●●
PostgreSQL:	●●●		SQLite:	●●●		DuckDB:	●●●●		MongoDB:	●●
ETL/ELT:	●●●●		PowerBI:	●●		SQL:	●●●		Excel:	●●●
RAG:	●●●●●		LLM/NLP:	●●●●		Feature Extraction:	●●●●		AI Agents:	●●●●●

Soft Skills

Skill	Level		Skill	Level		Skill	Level
Team work:	●●●		Self-organised:	●●●		Project management:	●●●●
Accounting:	●●		Quality control:	●●●●		Visual communication:	●●●●●
Quantiative research:	●●●●		Prompt engineering:	●●●●			

Experience

DATA ANALYTIC ENGINEERING — Jan 2025 – Present
Self-Employed | consultant — *Project based – Espoo, Finland*

offer an extensive range of data engineering, analytics, and business intelligence services tailored to your needs. With a focus on spatial data, urban environments, and the complexities of the built environment, I ensure that my expertise translates into actionable insights. Specialising in ETL/ELT processes, I adeptly parse and process diverse data types, presenting results that are not only clear but also aligned with your objectives.

Building information backend — Jan 2026 – Present
Apex-Heat – Finland

- Producing data pipline to transform and calculate necessary measures of **buildings spatial data** in Finland
- Developing API based pipline for building calculations in Finland.
- Assessing and structuring the data models for EU countries.

Optimisation, technical debt — Jan 2025 – Dec 2025
Apex-Heat – Finland

- Resolving **technical debt**. Improving the efficiency of the data pipelines.
- Consulting the implementation of **Generative AI**.
- Migrating from **Pandas** to **Polars** to improve the efficiency and calculation time.
- Improving the design pattern, and **writing documentations**.
- Adjusting an improving data processing test coverage and **testing** methods.
- Optimising the SQL queries to improve response time.

- Designed and deployed database in **PostgreSQL** and **DuckDB** data lake for research data in our team.
- Preparing and updating **visualisations** for lecture and presentation.
- ETL/ELT processes with data stewardship duties to acquire, maintain and provide research data.
- Self-taught programming skills, and further obtained formal education in data science.

Optimisation Project   Jan 2025 – Mar 2025
Apex-Heat Espoo, Finland

- Resolving **technical debt**. Improving the efficiency of the data pipelines.
- Migrating from **Pandas** to **Polars** to improve the efficiency and calculation time.
- Improving the design pattern, and **writing documentations**.
- Retaining proper vesion control to smooth migration to Polars
- Adjusting an improving data processing test coverage and **testing** methods.
- **Optimising** the SQL queries to improve response time.
- Resolving the technical debt in the data pipeline codebase.

Building Database   Dec 2025 – Present
Apex-Heat Espoo, Finland

- Acquiring and processing building data from Finland
- Modelling and enhancing the building data models in the pipeline
- Expnding data coverage to include additional countries (Sweden, Norway, Netherlands)
- Designing and implementing connection to Finnish building data API (Ryhti)

Ph.D. Candidate   Sep 2020 – Present
Aalto University   *Full-time – Espoo, Finland*

- Deploying and maintaining **AZURE functions** to store real estate data for research by scanning and scrapping websites for property advertisements.
- Designing data-pipelines for local AI to extract features from text and scrctured data.
- Applying Econometric, ML, time-series and data analysis for **quantitative research**.
- Processing HTML and PDF files and implementing **RAG** to extract structured data from the land use plan documents.
- Preparing and updating **visualisations** for lecture and presentation.
- ETL/ELT processes with data stewardship duties to acquire, maintain and provide research data.
- Self-taught programming skills, and further obtained formal education in data science.

Research assistant   Jun 2019 – Sep 2019
Aalto University Full-time – Espoo, Finland

- Working on an **Agent Based Modelling (ABM)** solution to simulate parking pressure in Otaniemi campus area.
- Collaborating MIT CityLab project on agent based modelling simulation.
- implementing simualtions in GAMA Platform

Data Analytics Engineer   Sep 2020 – Dec 2024
Qissa kaupunkisuunnitteluanalytiikka Oy – Startup   *Part-time – Espoo, Finland*

- Designing data pipeline to gather data form REST APIs, cleaning, **Geo-coding** and storing in accordance to the specifications requested by clients
- Creating **Spatial data** dashboard for spatial network analysis back-end. The analysis used HSL, HERE and HSY APIs to gather and process the data and perform **spatial network analysis**.
- Extracted, processed and served sensus data from US, Denmark, Sweden and Finland for calculating CO_2 emission from commuting.

Planning Assistant   Nov 2018 – Jun 2021
WSP Finland Oy   *Part-time – Helsinki, Finland*

- Performing **Spatial Data analysis**, Processing and storing spatial.

- Performing network analysis for pedestrian route choice forecast. The analysis was fine tuned to existing situation, and then used to forecast pedestrian flow after urban development
- Preparing analysis, graphs, maps and data **visualisations** for stakeholders, projects managers and clients.
- Providing **GIS analysis** to transport engineers, landscape designers, urban planners and architects.
- Setting up ArcGIS Online platroms for **maritime** planning.
- Programming and producing dynamic 3D model of the cities using ESRI CityEngine

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GIS Operator   Aug 2015 – May 2016
University of Tehran   *Part-time, Tehran, Iran*

- Gathering, processing and preparing GIS data for urban designers to implement and test new directives for urban design in Tehran City

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Chief Operating Officer   Aug 2011 – Aug 2018
Airsa Dorsa Industries   *Full-time, Karaj, Iran*

- **Accounting**, cost calculation, financial analysis, human resources and BI
- Provided in house **graphic design**, CAD and technical solutions for clients.
- Negotiating with the clients regarding their designs, pricing and production.
- Managing timelines of production, maintenance and order delivery.
- Auditing, accounting, process and inventory management.
- Admin duties, supervision duties, high-frequency welding, silk screen printing.

Education

Aalto University   Espoo, Finland
Doctor of Philosophy in Technology, Real Estate Economics   *Sep 2020 - Present*

Aalto University   Espoo, Finland
MSc. (Tech.) Urban Studies and Planning in Real Estate Economic   *Sep 2018 - Jul 2020*
GPA: 4.1/5, Graduated with honours

University of Tehran   Tehran, Iran
BA. Town Planning   *Sep 2011 - Jun 2015*
GPA: 16.67/20, Academic excellence

Machine Learning | Statistical models | Econometrics

Uni-variate time-series: ●●●	**VAR time-series:** ●●●	**Co-integration time-series:** ●●
multi-variate time-series: ●●●	**OLS:** ●●●●●	**IV-OLS:** ●●●●
Panel data: ●●●●	**Generalised Method of Moments:** ●●●●	**Generalised linear models:** ●●
Spatial econometrics: ●●●●	**Survival/time-to-event:** ●●●●●	**Additive hazard models:** ●●●●●

Volunteer Work

- DataTribe collective moderator, contributor
- DataTribe collective speaker: Spatial data analysis, spatial data engineering
- Helsinki Data Week volunteer (2024 & 2025), contributor

Disclaimer: This resume is designed with LaTeX, and contains white text for the skill ratings to increase the accuracy of automated scanning and processing. The white text represents the truth and does not present any additional information that is not included in the visible text.