

Babäk Firoozi Fooladi

Location: Espoo, Uusimaa, Finland

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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.

Technical Skills



Soft Skills



Experience

DATA ANALYTIC ENGINEERING

Self-Employed | Consultant

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.

Optimisation Project

Apex-Heat Espoo, Finland

Jan 2025 – Present |

Part-time – 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 version control to smooth migration to Polars
- Adjusting and 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

Apex-Heat Espoo, Finland

Dec 2025 – Present

- Acquiring and processing building data from Finland
- Modelling and enhancing the building data models in the pipeline
- Expanding 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 structured 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 simulations in GAMA Platform

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

- Designing data pipeline to gather data from 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 CO₂ 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 platforms for **maritime** planning.
- Programming and producing dynamic 3D model of the cities using ESRI CityEngine

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

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 <i>Doctor of Philosophy in Technology, Real Estate Economics</i>	Espoo, Finland Sep 2020 - Present
Aalto University <i>MSc. (Tech.) Urban Studies and Planning in Real Estate Economic</i> GPA: 4.1/5, Graduated with honours	Espoo, Finland Sep 2018 - Jul 2020
University of Tehran <i>BA. Town Planning</i> GPA: 16.67/20, Academic excellence	Tehran, Iran Sep 2011 - Jun 2015

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.