Babäk Firoozi Fooladi

[LinkedIn](#) | [GitHub](#) | [StackOverFlow](#)

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Data Analytics Engineer | Data Engineer

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

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

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

Experience

DATA ANALYTIC ENGINEERING
Self-Employed | Apex-Heat – Startup

Jan 2025 – Present
Part-time – Espoo, Finland

- Resolving **technical debt**.
- 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.

Ph.D. Candidate
Aalto University

Sep 2020 – Present
Full-time – Espoo, Finland

- Deploying and maintaining **AZURE functions** to store real estate data for research by scanning and scrapping websites for property advertisements.
- 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.
- Performing **GIS analysis** to produce and maintain research datasets, and **geo-code** real estate transactions.
- Designed and deployed database in **PostgreSQL** and **DuckDB** data lake for research data in our team.
- Preparing and updating **visualisations** for lecture and presentation.
- Performing **time-to-event** statistical modelling for my research using parametric, semi-parametric and non-parametric models. These models include longitudinal data, repeating event, multi-state and joint models.
- 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
Aalto University Full-time – Espoo, Finland

Jun 2019 – Sep 2019

- 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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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, 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.