

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 abundance of experience with spatial data, GIS, econometrics, statistics, and data science utilising R, Python, Julia, and SQL. with experiences in data related fields, I can implement data pipelines to acquire, ingest and store the data in scheduled processes, batches and ad-hoc delivery from various sources. Further, I conceptualise and design AI Agents to automate various tasks using local and serving models.

Technical Skills



Soft Skills



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 and 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

- Designing data-pipelines for local AI to extract features from text and structured data.
- Providing IT service and assistance to my research team to resolve issues with their computers and software.
- Applying Econometric, ML 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 simulations in GAMA Platform
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Data Analytics Engineer

Qissa kaupunkisuunnitteluanalytiikka Oy – Startup

Sep 2020 – Dec 2024

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 census data from US, Denmark, Sweden and Finland for calculating CO₂ emission from commuting.

Planning Assistant

WSP Finland Oy

Nov 2018 – Jun 2021

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

University of Tehran

Aug 2015 – May 2016

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

Education

Aalto University

Doctor of Philosophy in Technology, Real Estate Economics

Esbo, Finland

Sep 2020 - Present

Aalto University

MSc. (Tech.) Urban Studies and Planning in Real Estate Economic

GPA: 4.1/5, Graduated with honours

Esbo, Finland

Sep 2018 - Jul 2020

University of Tehran

BA. Town Planning

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, contributor

Disclaimer: This resume is designed with L^AT_EX, 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.