

# Babäk Firoozi Fooladi

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

Location: Espoo, Uusimaa, Finland

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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

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:	●●●●●
Quantitative research:	●●	Prompt engineering:	●●●●		

### Experience

<b>DATA ANALYTIC ENGINEERING</b> <i>Self-Employed   Apex-Heat – Startup</i>	Jan 2025 – Present <i>Part-time – Espoo, Finland</i>
<ul style="list-style-type: none"><li>Resolving <b>technical debt</b>.</li><li>Consulting the implementation of <b>Generative AI</b>.</li><li>Migrating from <b>Pandas</b> to <b>Polars</b> to improve the efficiency and calculation time.</li><li>Improving the design pattern, and <b>writing documentations</b>.</li><li>Adjusting an improving data processing test coverage and <b>testing</b> methods.</li><li><b>Optimising</b> the SQL queries to improve response time.</li></ul>	
<b>Ph.D. Candidate</b> <i>Aalto University</i>	Sep 2020 – Present <i>Full-time – Espoo, Finland</i>
<ul style="list-style-type: none"><li>Deploying and maintaining <b>AZURE functions</b> to store real estate data for research by scanning and scrapping websites for property advertisements.</li><li>Designing data-pipelines for local AI to extract features from text and scrctured data.</li><li>Applying Econometric, ML and data analysis for <b>quantitative research</b>.</li><li>Processing HTML and PDF files and implementing <b>RAG</b> to extract structured data from the land use plan documents.</li><li>Performing <b>GIS analysis</b> to produce and maintain research datasets, and <b>geo-code</b> real estate transactions.</li><li>Designed and deployed database in <b>PostgreSQL</b> and <b>DuckDB</b> data lake for research data in our team.</li><li>Preparing and updating <b>visualisations</b> for lecture and presentation.</li><li>ETL/ELT processes with data stewardship duties to acquire, maintain and provide research data.</li><li>Self-taught programming skills, and further obtained formal education in data science.</li></ul>	
<b>Research assistant</b> <i>Aalto University Full-time – Espoo, Finland</i>	Jun 2019 – Sep 2019
<ul style="list-style-type: none"><li>Working on an <b>Agent Based Modelling (ABM)</b> solution to simulate parking pressure in Otaniemi campus area.</li><li>Collaborating MIT CityLab project on agent based modelling simulation.</li><li>implementing simualtions in GAMA Platform</li></ul>	

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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 CO<sub>2</sub> emission from commuting.

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## 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

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## Education

### Aalto University

Doctor of Philosophy in Technology, Real Estate Economics

Espoo, Finland  
Sep 2020 - Present

### Aalto University

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

Espoo, Finland  
Sep 2018 - Jul 2020

### University of Tehran

BA. Town Planning

Tehran, Iran  
Sep 2011 - Jun 2015

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## Volunteer Work

- DataTribe collective moderator, contributor
- DataTribe collective speaker: Spatial data analysis, spatial data engineering
- Helsinki Data Week volunteer, contributor