

# 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 am service minded and can effectively provide data analysis, solutions and insights for the business needs. 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><br><i>Self-Employed   Apex-Heat – Startup</i>  | Jan 2025 – Present<br><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><br><i>Aalto University</i>   | Sep 2020 – Present<br><i>Full-time – Espoo, Finland</i> |
| <ul style="list-style-type: none"><li>Designing data-pipelines for local AI to extract features from text and scrctured data.</li><li>Providing IT service and assitance to my research team to resolve issues with their computers and software.</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>Preparing and updating <b>visualisations</b> for lecture and presentation.</li><li>Self-taught programming skills, and further obtained formal education in data science.</li></ul> |   |
| <b>Research assistant</b><br><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>  |   |

**Data Analytics Engineer**

*Qissa kaupunkisuunnitteluanalytiikka Oy – Startup*

Sep 2020 – Dec 2024  
*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<sub>2</sub> 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 platroms 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*

Espoo, Finland  
*Sep 2020 - Present*

**Aalto University**

*MSc. (Tech.) Urban Studies and Planning in Real Estate Economic*  
GPA: 4.1/5, Graduated with honours

Espoo, 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**

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

**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.*