

# Babäk Firoozi Fooladi

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

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## Data Analytics Engineer | Data Engineer | Researcher

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 environment, 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



## Soft Skills



## Experience

### DATA ANALYTIC ENGINEERING

*Self-Employed | consultant*

Jan 2025 – Present

*Project based – Espoo, Finland*

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.

### Building information backend

Apex-Heat – Finland

Jan 2026 – Present

- Producing data pipeline to transform and calculate necessary measures of **buildings spatial data** in Finland
- Developing API based pipeline for building calculations in Finland.
- Assessing and structuring the data models for EU countries.

### Optimisation, technical debt

Apex-Heat – Finland

Jan 2025 – Dec 2025

- Resolving **technical debt**. Improving the efficiency of the data pipelines.
- 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.

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### 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.
- 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, 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.
- 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

#### **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 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 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*

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

Uni-variate time-series: ●●●

multi-variate time-series: ●●●

Panel data: ●●●●

Spatial econometrics: ●●●●

VAR time-series: ●●●

OLS: ●●●●●

Generalised Method of Moments: ●●●●

Survival/time-to-event: ●●●●●

Co-integration time-series: ●●

IV-OLS: ●●●●

Generalised linear models: ●●

Additive hazard models: ●●●●●

## Volunteer Work

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