

# Adrian C. Prelipcean

ENGINEERING · DATA SCIENCE · GIS · TRANSPORTATION

Stockholm, Sweden

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## Personal Profile

An engineer, entrepreneur and avid problem solver, I spent my career building scalable services to help solve difficult problems. I have 10+ years of experience in software development, out of which 7 years are in the industry sector (LogTech, GreenTech, EdTech) and 6 years are in academia (MSc and PhD in GeolT and Transportation Science). I am interested in working on environmental and ethical solutions.

## Work Experience

### Adrian C. Prelipcean Consulting

Stockholm, Sweden

IT Consultant

2023 - Present

- Helping startups decide and execute on go live strategies
- Contributing to system architecture, implementation and deployments
- Offering tech mentorship while transitioning to in-house teams
- Startup partnerships:
  - Earthtrust - <https://earthtrust.life/>
  - Gordian - <https://thegordian.io/>
  - Revive Retail - <https://www.reviveretail.se/>
- **Technical Skills:** AWS, PostgreSQL, Supabase, PostgREST, Node.js, Next.js, Typescript, React, CI/CD, Supertokens, DevOps, Terraform.
- **Soft Skills:** Product Management, Engineering Management, Prototyping.

### Pedago Labs

Stockholm, Sweden

Senior Software Engineer

2023 - 2024

- Designed and implemented a Retrieval-Augmented Generation (RAG) pipeline, prioritizing information integration and user sovereignty.
- Engineered a high-speed pipeline for generating earnings report videos, merging real-time and historical data for a rapid 12-15 minute turnaround post-earnings call.
- Developed a dynamic pipeline for automated educational content generation, extracting and synthesizing information from internal knowledge bases and external sources.
- Bridged technical and non-technical teams, translating complex requirements for streamlined communication and workflow integration.
- **Technical Skills:** LLM, NLP, ChatGPT, Vector embeddings, PostgreSQL, CI/CD, GraphQL, React, Capacitor.
- **Soft Skills:** Product Management, Prototyping, Communication, Research and Development.

### Airmee

Stockholm, Sweden

Founder and CTO

2016 - 2023

- Took the company from an "Uber for deliveries" idea lacking products and market fit to one of the leading logistics companies in Sweden. As part of this journey, I helped scaling the company from 2 to 100 people, and was responsible for Airmee's tech and R&D.
- Designed the system architecture and built the first stable version(s) of all core products and services ( 10 different products). The system scaled to 10+ million deliveries in 3 different countries with negligible hosting costs and is handled by a small engineering team of 20 people.
- Designed, built, and then hired and managed the teams that took ownership over multiple high value services, such as:
  - real time and close to real time optimization services, which provide 90-100% automated routing with industry leading runtimes.
  - courier performance expectation model, which is used for differentiating route complexity based on courier performance.
  - data ingestion pipeline, which automatically enables high quality optimization in new regions and countries within minutes.
  - real world performance analysis of models and optimization output, which is used as a company KPI.
  - integration solutions with partners ranging from local stores to international enterprises (e.g., Amazon, H&M, Shein, etc.)
- Managed the engineering and data science teams and products, performed one on ones, established hiring and onboarding processes.
- Designed processes that combine academic innovation with engineering reliability, and established the best practices for frequent and stable releases. Set up processes for system alarms, monitoring and disaster recovery, where each team has DevOps responsibilities.
- Responsible for AWS cloud administration (2016-2023) and PostgreSQL database administration (2016-2021)
- Responsible for the technical due diligence as part of various successful pre-seed, seed and series A rounds funding rounds.
- Aided commercial teams in negotiations with service providers such as AWS, Google Maps, Twilio, SendGrid, etc.
- **Technical Skills:** Software Architecture, AWS, Node.js, Serverless, CI/CD, Docker, PostgreSQL, PostGIS, Python, NumPy, Pandas, Scikit-learn.
- **Soft Skills:** Team Management, Communication, Product Management, Board Member, Recruitment, Vendor Price Negotiation.

### KTH - Royal Institute of Technology

Stockholm, Sweden

Research and Teaching Assistant

2012 - 2016

- Presented research findings in various conferences and partner meetings.
- Software developer and data scientist for various research projects.
- System admin for on premise server hosted for various research projects (Ubuntu + Apache Tomcat / Express).
- Teaching assistant for GIS Architecture and Algorithms, Web and Mobile GIS, and Spatial Databases.
- **Technical Skills:** PostgreSQL, PostGIS, Geoserver, Weka, Angular, Node.js, Express, Android (Java), iOS (Objective-C), Ionic, Apache Tomcat.
- **Soft Skills:** Grading Students, Time Management, Communication, Presentation skills.

# Skills

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<b>Cloud Services</b>	AWS (AWS Lambda, RDS, API Gateway, Cloudfront, Cloudwatch, S3, IAM, VPN), Supabase, Heroku, Terraform.
<b>Frontend</b>	Angular, React, HTML/CSS, Javascript.
<b>Backend</b>	Node.js (Serverless for AWS Lambda), Next.js, Typescript, Python (both custom libraries and Serverless for AWS Lambda).
<b>Database</b>	PostgreSQL (with various extensions such as PostGIS, pgRouting, pgTAP, pgCrypto), MySQL, SQLite.
<b>Data Science</b>	Python, SciPy, NumPy, pandas, OR-tools, QGIS, Weka.
<b>CI/CD</b>	Bitbucket and Github Actions with custom built Docker images for testing, linting and automatic (or one click) deployments.
<b>Soft Skills</b>	Product Management, Team Management, Team Culture, Recruitment, Communication.

# Education

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**KTH - Royal Institute of Technology** Stockholm, Sweden  
PhD in Transportation Science and Geoinformation Technology Sep 2014 - Jun 2018

- Implemented an open source system for travel diary collection automation
- Honorable mention at the 2018 Eric Pas Dissertation competition
- Published 10 peer reviewed papers (4 journal publications, 6 conference proceedings)
- International speaker at various academic and tech conferences
- Reviewer for various international journals and conferences
- **Skills:** Statistical Modelling, Machine Learning, Software Architecture, Algorithms, GIS, Transportation Science, Data Visualization

**KTH - Royal Institute of Technology** Stockholm, Sweden  
Master of Science in Transportation Science and Geoinformation Technology Aug 2012 - Jun 2014

- Implemented a spatio-temporal aware alarm clock
- Thesis Internship at University of Bremen
- Course project in NLP on building a teacher and course recommendation system based on a set of papers
- **Skills:** Software Development, GIS, Spatial Databases, Transportation Science, NLP

**Technical University of Civil Engineering** Bucharest, Romania  
Bachelor of Engineering in Geodesy Oct 2008 - Jun 2012

- Implemented an on-demand 3D grid generation library for ad-hoc spatial reference systems
- Specialised in GIS, Spatial Geodesy, and Cartography
- **Skills:** AutoCAD, ArcGIS, Spatial Algorithms, Statistics

# Selected Publications

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## JOURNAL ARTICLES

- 1 A. C. Prelipcean, G. Gidófalvi, Y. O. Susilo (2018) - MEILI: A travel diary collection, annotation and automation system  
Computers, Environment and Urban Systems 70, 24-34
- 2 A. C. Prelipcean, G. Gidófalvi, Y. O. Susilo (2018) - Longest common subsequences: Identifying the stability of individuals' travel patterns  
Preprint, part of PhD Thesis
- 3 A. C. Prelipcean, G. Gidófalvi, Y. O. Susilo (2017) - Transportation mode detection—an in-depth review of applicability and reliability  
Transport reviews 37 (4), 442-464
- 4 A. C. Prelipcean, G. Gidófalvi, Y. O. Susilo (2016) - Measures of transport mode segmentation of trajectories  
International Journal of Geographical Information Science 30 (9), 1763-1784
- 5 A. C. Prelipcean, G. Gidófalvi, Y. O. Susilo (2014) - Mobility collector  
Journal of Location Based Services 8 (4), 229-255

## CONFERENCE PROCEEDINGS

- 1 A. C. Prelipcean, T. Yamamoto (2018) - Workshop synthesis: New developments in travel diary collection systems based on smartphones and GPS receivers  
Transportation Research Procedia 32, 119-125, Montréal, Canada
- 2 A. C. Prelipcean, G. Gidófalvi, Y. O. Susilo (2017) - A series of three case studies on the semi-automation of activity travel diary generation using smartphones  
Transportation Research Board 2017, Washington DC, USA
- 3 A. C. Prelipcean, F. Schmid, T. Shirabe (2015) - A space time alarm  
Progress in Location-Based Services 2014, 187-198. Vienna, Austria

# Interests

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<b>Endurance Sports</b>	I enjoy endurance activities, such as long distance running and biking, and I recently picked up swimming.
<b>Sustainability</b>	I'm always looking for ways of minimizing my carbon footprint, as well as supporting various circular economy projects.
<b>Music</b>	I have enjoyed playing guitar since I was a teenager.

**References available upon request.**