Yagmur Gulec

Software Developer
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Summary

With a background in numerical modeling from academic research, I transitioned to software development, earning a Master's degree in computer science. I have gained hands-on experience across diverse projects and technologies. A quick learner with strong adaptability, I continuously expand my knowledge through personal projects. Passionate about solving complex problems, optimizing performance and building scalable applications, with a strong interest in continuous deployment and automation.

Technical Skills

Programming: Python, SQL, JavaScript, HTML, CSS
Frameworks: FastAPI, React, Next.js
Cloud & DevOps: AWS (S3, Lambda, EC2), Docker, Linux, Bash
Database: MySQL, PostgreSQL
Developer Tools: Git, VS Code

Education

- **Master of Science in Computer Science** January 2022 - May 2024
  Bishop's University, Québec
- **Bachelor's in Mechanical Engineering** September 2007 - June 2011
  Celal Bayar University, Turkey

Personal Projects

- End-to-End Geospatial Climate Data Visualization with Spring Boot, PostgreSQL, and Deck.gl **PostGIS PostgreSQL (Database), Spring Boot (Java Backend for GeoJSON format), Typescript, React, Deck.gl (Frontend)** Github Repository | Youtube Video | Colab Project Folder
  - Data fetching: Bash script with GNU parallel with multiple tokens in a round robin fashion
  - Data preprocessing: Python (Asyncio, Pandas)

Experience

- **Software Developer Intern** February 2024 - March 2025
  Riipen Level UP and Beyond the Cloud
  (For feedback and all projects: levelup.riipen.com/users/EzvbrEYz)
  - Developed a full-stack interactive dashboard for data-driven insights for a prediction market dataset, leveraging **Python, Pandas, Plotly Dash, AWS Lambda and API Gateway**
  - Optimized MySQL database schema for a voluntary board management system, improving query efficiency.
- **Ph.D. Researcher in Mechanical Engineering** Jan. 2019 - Sept. 2021
  University of Sherbrooke, Québec
  - Developed a numerical sub-model in OpenFOAM by implementing a dynamic contact angle model, enabling realistic simulation of physical interactions between heated surfaces and a growing vapor bubble in a liquid pool. **(Object-Oriented C++)**.
  - Deployed large-scale simulations on High-Performance Computing (HPC) clusters, using Bash scripting to automate job scheduling and data processing. **(Bash scripting and Linux)**

Languages

English: Fluent | **French:** Intermediate | **Turkish:** Native