Vasileios Karapatsias

Electrical & Computer Engineer, AI Engineer

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About

Committed to continuous learning and self-development, with nearly four years of professional experience as a AI and Software Engineer. Grounded in a robust educational background, delivering high-quality work and contributing to team goals. Through volunteering, cultivated diverse skills such as project management, teamwork, leadership, negotiation, conflict resolution, and public speaking.

Areas of Expertise

Machine Learning, AI, Data Engineering, IoT, ETL, Software Development, Automatic Control, Smart grids & renewable energy.

Work Experience

Software Engineer, *Adaptive Sensory Technology* **Munich, GE** *Sep 2022 - present*

- Revamped and optimized the existing codebase by implementing performance enhancements and adding new features on a high end solution that allows the ophthalmologists to assess efficiently their patients' eyesight.
- Automated device deployment and installation procedures, reducing the required time by 80%.
- Engineered and deployed a logging system in C++, accelerating issue detection and bolstering system reliability.

Programming languages used: Shell, C++, Java, Javascript, Python

Research Assistant, *Center for Research and Technology HELLAS* **Thessaloniki, GR** *Jan 2020 - Oct 2021*

Conducted research and provided software solutions inside the premises of green energy oriented H2020 projects.

- **RENAISSANCE H2020:**
  - Designed and developed a smart end-device to enable Local Energy Communities' members participation in energy exchanging marketplaces.
  - Control and manage the grid's assets, optimize the energy consumption, predict the consumed and generated energy with over 90% accuracy and support OpenADR communication protocol.
- **INTERPRETER H2020:** Designed and developed two high-quality, innovative tools and deployed them as services.
  - *Grid management tool* generates a digital model of a distribution network, allowing the execution of fast Unbalanced Power Flow and State Estimation (over 90% accuracy).
  - *Predictive Maintenance tool* predicts grid's maintenance needs utilizing an ensemble model and suggests optimal maintenance actions to the user in less than 6 seconds, that minimizes the required cost and unavailability periods.

Programming languages: Python, C/C++, SQL

Education

MSc Electrical & Computer Engineering *Auth* **Thessaloniki, GR** *Sept 2013 - Nov 2019*

Specialization area of Electronic & Computer Engineering

- **Thesis:** Similarity based Multiple Kernel estimation of rice agronomic traits, using multi-spectral imagery.
- **Erasmus student:** Master of Computer Science, AGH University of Science and Technology, Krakow PL, February - June 2017
- **Volunteering:** Board of European Students of Technology, Feb 2015 - May 2020
  - President of Local BEST Group of Thessaloniki (Aug 2017 - Aug 2018)
  - Member of the Corporate Relations Team (2015 - 2020) and Information Technologies Team (2015 - 2019)
  - Main Organizer of "Career Days - Job Fair 2016 - AUTh" (over 60 companies and more than 500 attendees)

Skills

- **Programming Languages:** Python, Bash, SQL, C/C++, Java, Matlab
- **Technical skills:** Machine Learning, Deep Learning, Git/GitLab, Timeseries forecasting, REST APIs, Database management, Apache Kafka, AWS, Kubernetes, Docker
- **Frameworks:** Tensorflow, xgboost, Flask, Scikit-learn, Pandas, NumPy
- **Software:** PyCharm, Jupyter Notebook, Postman, PuTTY, VirtualBox
- **Soft Skills:** Adaptability, Problem-Solving, Teamwork, Communication, Planning
- **Languages:** Greek (Mother tongue), English (C2), German (B2), Chinese (HSK 2)

Certifications

- Deep Learning Specialization, *DeepLearning.AI*
- DeepLearning.AI TensorFlow Developer Specialization, *DeepLearning.AI*
- DevOps, DataOps, MLOps, *Duke University*
- ETL and Data Pipelines with Shell, Airflow and Kafka, *IBM*