

Alexandros Tsafos

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EDUCATION

National Technical University of Athens 09/2018 - 11/2023
MEng in Electrical & Computer Engineering (5-year Diploma, 300 ECTS) Athens, Attiki, Greece
Relevant Coursework: Advanced Topics in Database Systems, Analysis & Design of Information Systems, Distributed Systems, Algorithms, Neural Networks & Intelligent Systems, Forecasting Techniques
GPA: 8.10/10.00
Thesis: Multivariate Computational Load Timeseries Prediction & Resource Provisioning with Machine Learning (Supervisor: Prof. Dimitrios Tsoumakos, Grade: 10/10)

WORKING & RESEARCH EXPERIENCE

Software Competitiveness International S.A. 01/2024 - Present
Junior Software Engineer (Data)

- Analysing Cloud offerings of AWS, GCP, and MS to design and implement ESA's AI-ready multi-mission archiving.
- Designed and implemented a timeseries forecasting and anomaly detection system to automate the previously manual process using Python, Pandas, Tensorflow, Keras, and Git on ESA's MALT-P project.
- Reporting directly to technical owners; presenting progress and discussing further steps with ESA's stakeholders of different disciplines.

Information Management Unit, NTUA 11/2023 - Present
Research Assistant

- Conducting research in a team of 8 researchers for EU-funded "SWARMCHESTRATE" project, regarding Application-level Swarm-based Orchestration Across the Cloud-to-Edge Continuum.
- Extending IMU's EMS, a Complex Event Managing System, to function in Swarm Computing systems, using Java, Oasis TOSCA, Docker and Kubernetes.

Software Competitiveness International S.A. 04/2022 - 01/2024
Junior Software Engineer

- Maintained and improved ARM Linux software for an external major Telecommunications customer using C/C++, Scala, Bash, Python, and Git.
- Enchanced the product's functionality by designing and implementing TWAMP as a new protocol feature to measure network connections' performance.

TEACHING EXPERIENCE

National Technical University of Athens 03/2023 - 01/2023
Teaching Assistant

- Delivered weekly lectures of the "Databases" SQL lab (Indexes, Constraints, Joins, Triggers, etc).
- Assisted over 50 undergraduate students with their course projects.

SKILLS

Programming Languages: Python, C/C++, SQL, Bash, Scala

Platforms/Tools: Apache Spark, Tensorflow, SKLearn, Docker, Git, LaTeX

Languages: Greek (Native), English (Fluent), German (Basic)

COMPETITIONS

Apps4Athens Hackathon: 5th Place | *Municipality of Athens*

Two-day Innovation Marathon focused on the digital transformation of Athens. Member of a 5-person team that proposed an Event App based on Personalized Recommendations. Designed the Recommender System and developed the Business Model. Also won a place in CrowPolicy's 6-month Incubator targeting the launch of the MVP.

14th National ECE Conference CODE: 1st Place | *ECESCON*

Three-hour hackathon, consisted of five algorithmic problems of increasing difficulty. Won, passing 24/25 total test cases.

Zero Robotics Finalists: Finals aboard the ISS | *MIT, NASA, ESA*

Competition for High School Students. Programming (in C) SPHERES satellites for a NASA mission. Finalists (twice, as a member of Zanneio Stardust), in the live championship aboard the International Space Station.

PROJECTS

LinkedIn Job Recommender | *Python, Web Scraping, Natural Language Processing (NLP), Word2Vec*

Content-based recommender for LinkedIn Jobs, with Web Scraping and NLP. Implemented with TF-IDF weighted Word2Vec embeddings, generating job recommendations based on a candidate's description.

Prediction of ML Operators Performance | *Spark, Hadoop, Scala, Python, Predictive Modeling*

Generated graphs of different types and used them as input for Scala Spark's GraphX operators, to extract data about their CPU, Memory, and Time usage. Developed Deep Learning & Regression models to predict their performance.

Neural Networks Projects | *Python, Pandas, Natural Language Processing (NLP), Word2Vec, Tensorflow, Keras*

Multiple machine learning projects for NTUA's Neural Networks Course, including Erythremato-Squamous Diseases classification, Species classification by codon usage, Movie Recommender and Genre Clustering, and Image Captioning.