

SOTIRIS TZAMARAS

Software Engineer / Data Science and AI



CONTACT

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🌐 Sotiris Tzamaras

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TECHNICAL SKILLS

Programming Languages:

Python, Scala, Java, JavaScript

Databases:

SQL/SQLite3, MongoDB

Data Science Tools:

NumPy, Pandas, Jupyter Notebooks, scikit-learn, NLTK, TensorFlow

Data Analytics Tools:

Microsoft PowerBI, Cognos Analytics, Matplotlib, Seaborn

Other Tools:

Latex, Git and Version Control, Unix scripting

LANGUAGES

- Greek (Native)
- English (Proficient – C2)

CAREER OBJECTIVE

Enthusiastic software engineer with a specialization on intelligent systems. Seeking a challenging position in a dynamic organization where I can utilize my skills in programming, machine learning, problem solving, and creative thinking. I am passionate about working with cutting edge technologies and looking for opportunities to apply and deepen my knowledge in data science.

EXPERIENCE

Research Internship

02/2022-09/2022 | Grenoble Alps University (UGA), France

- I was part of the Computer Science Laboratory (LIG), research team SLIDE
- Engineered the Q-learning algorithm within the DBMS using SQLite
- Identified that in a federated learning setting, SQLite is faster than Python
- Developed an interface (**FeReD**) which compares the two languages highlighting their learning performance, computational efficiency, succinctness and expressiveness

Python / SQLite3 / Unix Scripting / Node.js

Erasmus+ Internship | Research Assistant

03/2019-10/2019 | Halmstad University (HH), Sweden

- Contributed to further development, upgrading, testing and deployment of the Acumen modeling tool's codebase
- Later employed as a **Research Assistant**, responsible for migrating the graphical user interface to a browser-based alternative

Scala / Node.js / Acumen

EDUCATION

Master of Science in Informatics (M. Sc)

09/2021-09/2022 | Grenoble Alps University (UGA), France

- My specialization of choice was in Data Science and Artificial Intelligence.
- Engineered a unique application which allows for the control of media devices through the use of hand gestures while holding a phone
- Notable Courses: *Reinforcement Learning*, *Knowledge Representation*, *Advanced Algorithms in Machine Learning* and *Information Retrieval*

Bachelor of Science in Software Engineering (B. Sc)


Graduated 11/2020 | University of Ioannina (UOI), Greece

- Developed an LL(1) Parser with per-step details
- Researched if Cyber-Physical Systems can benefit from machine learning approaches and techniques
- Thesis name: *Expressing intelligence in models of Cyber-Physical Systems*


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CERTIFICATES

- Machine Learning Specialization by DeepLearning.AI and Stanford
- Data Analyst Professional Specialization by IBM
- Machine Learning Engineering for Production (MLOps) by DeepLearning.AI

ATTRIBUTES

- Productive Team Player
- Flexible
- Highly Adaptive
- Organized
- Resourceful
- Autonomous

REFERENCES

Available upon request.

PERSONAL PROJECTS

2023 Skill Extraction From Job Posts

- Developed a scraper that retrieves job posts from portals.
- Conducted in-depth exploratory data analysis on the scraped posts.
- Trained and compared various machine learning models, including supervised and self-supervised models, for identifying and extracting hard and soft skills.

selenium / NLTK / MongoDB / scikit-learn / TensorFlow

2023 Air Quality Time Series Forecasting

- Analyzed India's official air quality data by performing pre-processing, feature engineering and in-depth exploratory data analysis.
- Compared the performance of various machine learning models, including random forest (ensemble), long short-term memory (LSTM), and convolutional neural network (CNN).
- Conducted time-series forecasting using single-step, multi-step, single-output and multi-output models.
- Optimized the hyperparameters of the models using keras-tuner BayesianOptimization.

TensorFlow / keras-tuner / scikit-learn / XGBoost

CONFERENCE PRESENTATIONS

2018 T.E.I of Epirus Student's Achievements

I presented my contribution of an LL(1) Parser which was intended for computer science students and autodidacts studying compilers or parsers
Java / Parsers / Compiler Design

PUBLICATIONS

- 2022 Tzamaras, Sotirios, et al. "**FeReD: Federated Reinforcement Learning in the DBMS.**" Proceedings of the 31st ACM International Conference on Information & Knowledge Management. 2022. (Honorable Mention)
- 2021 Tzamaras, Sotirios, et al. "**Intelligent Techniques and Hybrid Systems Experiments Using the Acumen Modeling and Simulation Environment.**" IFIP International Conference on Artificial Intelligence Applications and Innovations. Springer, Cham, 2021.

HOBBIES / INTERESTS

