

ALBERTO SINIGAGLIA

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ABOUT ME

Computer and Data Scientist with an interest in AI in any sector it's applied, with a particular passion for Deep Reinforcement Learning. Currently doing a PhD at the University of Padova.

EDUCATION

Ph.D. in Deep Reinforcement Learning @ BMCS, University of Padova 2023 - ongoing

Master degree in Data Science, University of Padova 2021 - 2023

Final score: 110/110 with honors

Relevant Coursework: Machine & Deep Learning, Stochastic methods, Reinforcement Learning, Mathematical Optimization, Big Data Computing, Computer Vision, Time Series Analysis.

Bachelor degree in Computer Science, University of Padova 2018 - 2021

Final score: 110/110 with honors

Relevant Coursework: Object Oriented Programming, Algorithms and Data Structures, Cyber-Security, Calculus, Linear Algebra and Discrete Math, Computer Architecture, Databases.

High-School diploma in ICT, Istituto F. Severi 2013 - 2018

AWARDS

3 times winner of scholarship "1000 e 1 lode" for the years 2019, 2021, 2022, awarded only to the top 3% best performing students of each degree.

EXPERIENCE

Teacher Assistant February 2020 - June 2021
University of Padova *Padova*

- Teacher assistant for the courses of Logic, Programming 1 and Object Oriented Programming
- Supervised exams and homeworks for the cited courses
- Performed extra classes for advanced materials and for exam preparation

Java Developer - Internship May 2021 - July 2021
Euronovate group *Padova*

- Developed an internal tool for the synchronization and notifications of the ITS RedMine with the S.L.A. defined with the various customers, connected with multiple communication channels such as Slack, Telegram and Gmail for the alerts.
- Deployed in production using Docker during the internship, and the company is still using it and extending its capabilities.
- The tool has been implemented using technologies such as Java, Spring Boot, RedMine APIs, Grafana, Docker, Jackson XML, PostgreSQL.

Full-stack Developer, SEO specialist Jan 2018 - Ongoing
Non Solo Arredo S.R.L. *Padova*

- Achieved +40% growth in the last 2 years for the company website by optimizing loading time via caches, CDNs, lazy loading and following the best practices for accessibility.

- Developed from scratch the back-end for the main website nonsoloarredo.com
- Developed the company e-commerce justitalianwine.com
- The websites have been implemented using technologies such as PHP, Laravel, MySQL, Bootstrap, HTML, CSS, JQuery, JS, Google ReCAPTCHA, and is integrated with multiple tools for SEO.

SKILLS

Technologies	Tensorflow, PyTorch, Numpy, Pandas, R, Apache Spark, Python, JavaScript, C, C++, Java, Kotlin, PHP, HTML, CSS, JQuery, Java Spring, Laravel, Android, Matlab, ANTLR, LaTeX, MySQL, PostgreSQL, AWS, Docker, Git, Github Actions.
Soft Skills	Love working in a team, experience in managing high-pressure situations, time and task flexibility
Patterns & Practices	Object-Oriented Programming, Functional Programming, CI/CD, Microservices

PROJECTS

Snake DeepRL. Coded from scratch and solved the game of Snake, and some variants of it with walls, using Deep Learning and Reinforcement learning, with technologies such as Tensorflow and Numpy. ([Github repository](#))

Variance reduction optimizers comparison. Thoroughly studied the respective papers and implemented the SARAH, SpiderBoost and SNVRG variance reduction optimizers, and compared on multiple datasets. ([Github repository](#))

Attention sampling classification. Developed a system of two Neural Networks that exploit attention sampling able to classify mega-pixel images with order of magnitudes less FLOPS than usual CNNs. Trained using Reinforcement Learning estimators. ([Github repository](#))

Discrete GANs. Implementation of a Generative Adversarial Network on the MNIST digits dataset, using discrete output, trained using Straight through estimator. ([Github repository](#))

Self-Organizing Graph. Implemented from scratch self-organizing graphs using non-convex gradient based optimization using Javascript. ([Github repository](#))

Binarized Neural Networks. Implementation of binarized neural networks using first order logic and MaxSAT solvers in Python. ([Github repository](#))

EXTRA-CURRICULAR ACTIVITIES

- Proud and active member of multiple forums where I love to help other people, giving them insights or answering their doubts/questions, such as [Stack Overflow](#) and the corresponding [AI](#) and [Statistic](#) counterparts
- Always into some personal project, in order to expand my knowledge, apply new tools or learn new technologies.

CONTACTS & PROFILES

- [StackOverflow](#): @alberto-sinigaglia
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