

Astley Santos

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 astleys.github.io

TECHNICAL SKILLS

Programming Languages Java, Python, JavaScript, Kotlin, Scala, TypeScript, C/C++, SQL

AI & Machine Learning Deep Learning, PyTorch, Scikit-learn, Pandas, NumPy

Software Development HTML, CSS, React.js, Spring Boot, Node.js, Express.js, Angular, Django,
Android (Java/Kotlin), Flutter, iOS (Swift)

Misc Docker, Ansible, Gitlab CI/CD, Arduino

PROFILE

A Master's graduate in Computer Science with a deep appreciation for every stage of bringing an idea to life, from inception to development. My ambition lies in leveraging advanced technologies to tackle complex challenges with a strong interest in Software Development and Artificial Intelligence innovations. With a solid foundation in modern technologies and a passion for problem-solving, I am eager to contribute to impactful and meaningful projects.

WORK EXPERIENCE

Mobile Developer, LCSB - University of Luxembourg

04/2023 – 08/2023

- Contributed to the foundational work and initial mobile application features for the Luxembourg Centre for Systems Biomedicine (LCSB) that not only helps Parkinson's patients monitor their condition, but also helps medical researchers perform biomedical analyses
- The application was developed for iOS (iphone and watchOS) with Swift and for Android/Samsung (wearOS)

Teaching Assistant, University of Luxembourg

09/2022 – 01/23 | 09/2023 – 01/24

- Involved in the creation and automation of tests for grading programming assignments in a Web Development Bachelor's course.
- Strengthened sense of responsibility and liability, time management, communication and software testing

ACADEMIC EXPERIENCE

Affective Computing & GUI Evaluation – Master's Thesis

- Designed and implemented an affective computing model using EEG data to classify emotional responses to GUI designs
- Explored EEG-based brain activity representations for assessing user experience in Human-Computer Interaction (HCI).
- Applied Machine Learning techniques such as SVM, Random Forest, and KNN and Deep Learning models like CNN, DenseNet, and EfficientNet for classification tasks.
- Structured and pre-processed data, model development, fine-tuning, and performance visualization to optimize classification accuracy and computational efficiency.

Optimisation for Computer Sciences – Electrical Vehicle Taxi

- Developed a Genetic Algorithm for setting and optimising the planning of electrical vehicles taxis
- Collaborated with doctoral researchers, applied multi-objective optimisation techniques on real research problems and wrote a research paper as report
- Amplified my fondness in this field as its objective is to find optimised solutions for complex and practical problems and enhanced my research skills

DevOps – Automation Project

- Developed a CI/CD pipeline to automate environment setup, application deployment, and GitLab CI/CD workflows for integration, development, staging and production environments.
- Leveraged technologies such as Vagrant, Ansible, and Docker to automate deployments and infrastructure configuration.

Connected Autonomous Vehicle – Autonomous Vehicle Simulation

- Simulated an autonomous vehicle using the Udacity platform with ROS (Robot Operating System) and Docker.
- Developed core autonomous driving functionalities such as control systems for acceleration and braking, path planning and computer vision algorithm for traffic light detection and classification.

Full-Stack Web Development – Pharmacy Management

- Created a website responsible for managing a pharmacy - employees, clients and its products
- Used Spring Boot framework as server-side with a PostgreSQL database allocated in a Heroku cloud with ORM transactions. Used Angular 7 as front-end
- Consolidated the importance of coordination and communication between group members.
- Increased my interest in web development or development in general

Algorithm and Data Structure – Music Database

- Implemented a Java program that received and replied to music queries on a music database
- Practiced and comprehended relevant concepts such as Testing, Complexed Data Structure and Complexity Analysis and improved my problem analysis and problem-solving capabilities

ADDITIONAL

Amazon Student Programs x University of Luxembourg: All to Tech Mentorship Program 05/2024 – 09/2024

- Participated in a program designed to enhance technical interview skills. Engaged in multiple mock interviews and collaborative practice sessions focused on key coding interview topics, including algorithmic problem-solving and data structures.

Organization of a Workshop – PC Building 2021

- Pro-actively collaborated with some other students and crafted a workshop for people who were curious and/or had the desire to learn more about PC components and building it from scratch.

EDUCATION



Universidade Lusófona
de Humanidades e
Tecnologias
Portugal
2017-2020

Bachelor's in Computer Engineering

- Main courses: Algorithms and Data Structures, Artificial Intelligence, Data Science, Programming Languages, Computer Architecture, Operating Systems, Databases, Software Engineering, and many others.



University of Luxembourg
Luxembourg
2021-2025

Master's in Information and Computer Sciences

- Profiles: Artificial Intelligence and Software Engineering

PERSONAL

Languages

Portuguese (Native), English (Proficient), French (B1-B2), German (A2), Italian (Beginner)

Hobbies

Sports, Music, Cinema, Learning