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Ana Ramos

Summary

I am a 24 year old biomedical engineer. The most positive thing I can say about myself is that I always strive to learn new things. I consider myself a fast, adaptable and continuous learner who is organized and self-taught.

Professional Experience

OTO Systems

Junior Full Stack Engineer **October 2020 – present**

OTO Systems is a spin-off from **SRI International** that uses artificial intelligence to analyze speech. OTO processes millions of customer files to help companies, e.g. contact centers, to help unlock valuable data from voice interactions. My engineering team is spread between Portugal and Switzerland, so we plan, track and manage our agile and software development projects with Jira, Zeplin, Slack...

As expected from a startup company, I do a variety of tasks such as: writing internal/user documentation, code or even support.

During my work at OTO Systems, I test solutions for the DeepTone Web API. I'm also involved in developing front-end components for the DeepTone Demo. For this I work with ReactJS, mainly with typescript.

Nonius Software

Software Engineer Trainee **January 2020 – October 2020**

During my work at Nonius I was responsible for the design of the architecture and the development of a chatbot. Firstly, this bot is an IT support bot with artificial intelligence that improves the call center services of Nonius support. This project also deals with the development of a chatbot that will be integrated into the Nonius website at the end of the project (and can perform Human Handoff). My work started by analyzing the chatbot frameworks(cost-effective benefits, required architecture, time of development, ...) and determining the respective advantages and disadvantages. In addition to the theoretical analysis, a chatbot demo was developed with **Wit.ai** (with **Pyhton** on the server side in combination with the **Django web framework** for the front end) and with **DialogFlow** (with **Node.js**), which was originally integrated as a Google Assistant. The accepted chatbot framework was the **DialogFlow**. During application development, Node.js was used for the server side, and the front end was provided by the integration in Tiledesk.

Education

University of Minho, Braga, Portugal

Integrated Master's Degree in Biomedical Engineering **September 2014 – November 2019**

Multidisciplinary degree that prepared me for the following areas: biology and biochemistry, chemistry, electronics, computer science, mechanics, physics, physiology, statistics and others.
The **Master in Medical Informatics** offered training in the following IT subjects: cryptography, Distributed Programming, Data Mining and Machine Learning, Medical Imaging, Operating Systems Architecture, Databases (MySQL and PostgreSQL), including a master thesis in Deep Learning techniques for medical imaging. The dissertation resulted from the work of the Bioengineering and Telemedicine Group in combination with the investigation of deep learning approaches for the classification of breast diseases using X-rays.

Polytechnic University of Madrid, Madrid, Spain

Bioengineering and Telemedicine Group **September 2018 – February 2019**

Deep Learning approaches applied in brain segmentation of stroke patients at the Bioengineering and Telemedicine Group, using magnetic resonance images without a ground-truth label, under the *Erasmus+ Programme*.

Skills / Keywords

Databases: PL/SQL, PostgreSQL
Deep Learning frameworks: Keras and Tensorflow (Python)
Machine Learning and **Data Mining** Algorithms
Node.js on the server-side
React.js(Javascript), **Typescript**
API Protocols: REST
Python: Including libraries like Numpy, Scikit Learn, Pandas, and frameworks like Django
R programming: Data analysis
Unix: macOS

Academic Projects

- Brain Segmentation of stroke patients without a ground-truth label (**Deep Learning-Python**)
- CNN network approach to classify 1000 different pills (**Deep Learning-Python**)
- Database of pharmaceutical management (**framework Django**)
- Image J plug-in for extraction and classification of ulcer features (**Java plug-in**)
- Implementation of auction systems (**C Language**)
- Impl. of multi-agent systems for pharmacy management with **Java Agent DEvelopment Fram.**
- Data Mining techniques to predict the internment interval in breast tumor surgery (**Prolog**;**Weka**)
- Applications of **Talend** and **Power BI Software's** to analyze breast cancer factors

Publications

A Study on CNN Architectures for Chest X-Rays Multiclass Computer-Aided Diagnosis . May 18, 2020. Trends and Innovations in Information Systems and Technologies. WorldCIST 2020. Advances in Intelligent Systems and Computing, vol 1161. Springer, Cham

Certificates

October, 2020: Principles of Secure Coding
June, 2020: Server-side Development with NodeJS, Express and MongoDB
May, 2018: English B1 Course – BabeliUM Centro de Línguas
January, 2015: CAD Workshop: SolidWorks software – University of Minho