Alexandre Pinto

Software/Machine Learning Engineer
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Summary

Software engineer competent in implementing backend systems with focus on machine learning services. Enjoys tackling engineering problems with good system design choices, by writing clean code that strive for scalable and performant software.

Work Experience

Nov 2017 - Present

Machine Learning Engineer - WIT software
At WIT, I am responsible for turning machine learning experiments and proof-of-concept prototypes into production-ready solutions, always having performance and scalability in mind. I work mostly in the Natural Language Processing (NLP) sub-field of Artificial Intelligence, using state-of-art methods. My daily work encompasses all stages of research, design, implementation and testing of machine learning services (https://www.wcp.ai).

Technologies: Python, NumPy, Pandas, Scikit-learn, XGBoost, Tensorflow, Pytorch, Docker, Ansible, Git.

Nov 2016 - Oct 2017

Backend Developer - Ubiwhere
At Ubiwhere, I was part of the core team responsible for developing a smart water consumption platform for the city of Porto, Portugal. This meant building a system with high-availability, multi-tenancy and concurrency support. My job consisted in implementing REST APIs and developing the core of the backend web services. Furthermore, I was also involved in the development of the frontend mobile app, used by hundreds of users and available in multiple mobile operating systems such as Android and iOS (app-aguas-do-porto).

Technologies: Django/Python, Django REST Framework, Ionic, Docker, Git.

Oct 2015 - Jul 2016

Machine Learning Research Intern - INESCTEC / CISUC
At INESC TEC/CISUC, I was involved in a research team that developed a filter system that classifies public social data according to their potential relevance to a general audience, filtering out irrelevant information and relying primarily on linguistic and journalistic features (reminds.dcc.fc.up.pt).

Technologies: Python, NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, PyQt5.

Oct 2013 - Mar 2014

Software Developer - Pedro Nunes Institute (IPN)
At IPN (Laboratory for Informatics and Systems), I maintained and developed new features for the information systems.

Technologies: Apache Struts/Java, Ruby on Rails/Ruby, Git.

Education and training

- **University of Coimbra**
  Master Degree in Informatics Engineering - Intelligent Systems *2013 – 2016*
  - Graduated with 15/20 average
  - Dissertation titled "Classification of Social Media Posts according to their Relevance"
- **University of Coimbra**
  Bachelor Degree in Informatics Engineering *2010 – 2013*
  - Admission Grade: 17.55/20
  - Graduated with 16/20 average
- **High School - Quinta das Flores**
  Science and Technology Course *2007 – 2010*
  - Graduated with 16/20 average

Publications

- **Predicting the Relevance of Social Media Posts Based on Linguistic Features**
  Alexandre Pinto and Gonçalo Oliveira, H, and Alves, A., New Generation Computing, 2017
- **Comparing the Performance of Different NLP Toolkits in Formal and Social Media Text**
  Alexandre Pinto and Gonçalo Oliveira, H, and Alves, A., pp 1–16, vol 51, SLATE, 2016

Awards, Grants & Honours

Award to the 3% Best Students . . . . . 2010 – 2011
Award to the 3% Best Students . . . . . 2011 – 2012

Technical Skills

- **Programming Languages:** Proficient in Python, C and Java. Additional knowledge in ActionScript 3.0 and Matlab.
- **Web Frameworks:** Django, Django Rest Framework, FastAPI, Falcon, Flask, Apache Struts. Familiar with Rails.
- **Web protocols:** REST/RPC, gRPC with protocol buffers.
- **Machine Learning Tools:** Keras/Tensorflow, PyTorch, scikit-learn, XGBoost, SciPy stack (NumPy, Matplotlib, pandas), seaborn, Weka.
- **Artificial Intelligence:** Evolutionary Computation, Supervised/Unsupervised Learning Algorithms, Natural Language Processig.
- **Data Structures and Algorithms:** Knowledge of different data structures and optimization algorithms.
- **Control Version Systems:** Git.
- **Relational Databases:** PostgreSQL, MySQL.
- **NoSQL Databases:** MongoDB.
- **Deployment and Infrastructure:** Ansible, Docker.
- **Semantic Web:** Ontologies Representation (RDF,OWL), Triple Stores, SPARQL, Apache Jena, NLTK.
- **Hybrid Mobile App Frameworks:** Ionic.
- **Development Tools:** PyCharm, WebStorm, Datagrip, Sublime Text Editor.
- **Cloud Computing:** AWS EC2, GCP
- **Web:** Proficient with HTML. Familiar with CSS and Bootstrap.
- **Operating Systems:** Competent in GNU/Linux and Windows.
- **Productivity/Project Management Tools:** LaTeX, Trello, Redmine, Slack.
- **Languages:** Portuguese (fluent, native), English (very good).
- **Professional:** Self-motivated, Self-learner, Team Player, Planning and Organizational Skills.
- **Activities & Interests:** Reading, Exercising, Programming by passion and hobby.

Relevant Academic Projects

Mar 2016 - May 2016

Default Credit Card Prediction
This project was carried out in the context of the Pattern Recognition course. The goal of this project was to develop classifiers to predict if a given client would be able to pay (or not) its credit card in the next month. The project followed the various steps of a typical machine learning pipeline (data preprocessing, feature selection/reduction, classification and evaluation).

Technologies: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, PyQt5.

Feb 2014 - May 2014

Predicting the memorability of images
This project was carried out in the context of the Artificial Intelligence course. The goal of this project was the automatic classification of images into a degree of memorability by computing their levels of attention according to a set of dimensions.

Technologies: NumPy, Pandas, Scikit-learn.

Feb 2014 - May 2014

Semantic Search and Recommendation in eCommerce
This project was carried out in the context of the Semantic Web course. The objective of the project was to build an ecommerce website where users could search for electronic products, browse product categories and get recommendations.

Technologies: Protégé (Ontology editor), Apache Jena, Apache Tomcat.

Feb 2014 - May 2014

Expert Contact
This project was carried out in the context of the Software Project Management course. The objective of the project was to build a new way of communication between the nurses and patients with breast cancer during chemotherapy sessions. This project was a partnership between the research team working at Institute of Health and Care Sciences of the University of Gotemburg and the University of Coimbra and was conducted by a multidisciplinary team.

Technologies: Apache Struts, Hibernate, HTML, CSS(Bootstrap), Javacript, Git.