SARA VAGNARELLI

Software Engineer

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github.com/saravgn   saravagnarelli.com   💼 Work authorization: Australian Permanent Resident

EXPERIENCE

Software Development Engineer II
Amazon

📅 April 2021 - Present   📍 Sydney, Australia

Senior Software Engineer
Deckard Technologies

📅 Aug 2018 - Jan 2021   📍 Sydney, Australia

Deckard designs and develops analytical reporting systems using modern deep data mining, machine learning and predictive analytical algorithms to ensure that local governments have the insights to return equity of obligations back to the community and sustain healthy revenue to support smart city growth.

- Wrote **AWS CloudFormation** scripts to build CodePipelines for CI/CD and **ETL**. Designed scalable and economic data pipeline process that ensures reliability and consistency for a large number of data feeds. Created **Datadog** Dashboard and Alerts through CloudFormation scripts to analyse log stream.
  AWS - Python (TDD), Docker, boto3, CloudFormation, Jinja2, CloudWatch, CodePipeline, CodeBuild, Batch, S3, Glue(basic PySpark), Athena, EC2, Selenium, Jira, Github.
- **Developed a full-stack website - mainly the back-end** to create a unified view of output of the **data analytic processes** and enable us, data analysts, to quickly evaluate results and prove our algorithms. Techstack: **Python, Postgres, Rest-ful APIs, AWS-Cognito for user authentication, AWS API Gateway, Flask, React, Wireframe, LucidChart**.
  Contributed to React Redux Datatable library
  https://github.com/sean-ww/react-redux-datatable/graphs/contributors.

Software Engineer
Qualcomm ESGDA - Engineering Service Group Data Analytics

📅 Nov 2016 - May 2018   📍 Sydney, Australia

The Engineering Services Group Data Analytics team builds creative and reliable big data solutions that add value across Qualcomm. These solutions range from but are not limited to wireless communications, intellectual property and financial analysis.

- Accumulated significant experience in developing performant, efficient **Python** code, applying a test-driven methodology to guarantee the correctness of the code after modifications
- **Profiling and debugging** of performance related problems both in Python code and in **SQL** database code.
- Development of **REST-ful APIs** to access information and allow data exchange between multiple components of larger systems (**Flask, HTML, CSS**)
- **Automated regression test suite** which exercised 95%+ of the codebase using **PyTest** and **unittest**.
- Used **Jenkins** and **Docker** for continuous integration and **GitHub** for Revision Control. Followed an agile methodology and participation in weekly code reviews. Used **Jira, Confluence**.

SUMMARY

I have Bachelor's and Master's Degree in Computer Science and 5 years of working experience as Software Engineer. I enjoy developing and experimenting with new technology but I prefer to be technology-agnostic and find the best solution to the problem. I am looking for a challenging role that drives change and provides opportunities for career development.

EDUCATION

M.S. in Computer Engineering
Roma Tre University, Italy

📅 Oct 2012 - May 2015

B.S. in Computer Engineering
Roma Tre University, Italy

📅 Oct 2009 - May 2012

Deep Learning Nanodegree
Udacity

📅 Jan 2018 - Present

Full Stack Web Developer Nanodegree
Udacity

📅 May 2016 - Sept 2016

PROJECT EXPERIENCE

Dog-Breed Classifier
github.com/saravgn/dogbreedclassifier
Designed and trained a CNN to identify dog breeds. Applied Transfer Learning to improve the model. **Keras, NumPy, VGG-16, ResNet-50, Scikit-learn**

Sentiment Classification
github.com/saravgn/sentimentclassifier
Predict sentiment from movie reviews. **NumPy, Scikit-Learn**

Predicting Bike Sharing Data
github.com/saravgn/bikesharingpred
Built and trained a Neural Network from scratch to predict the number of bike-share users on a given day. **NumPy**

EXPERIENCE

Consultant / Software Engineer
Accenture

📅 Sep 2015 - Apr 2016   📍 Rome, Italy

Ministry of Economy and Finance - Indoor Navigation System
Joined Accenture as a graduate software engineer. My first role was as a part of a consulting team working with the Italian MEF (Ministry of Economy and Finance) developing an Indoor Navigation System this included producing a feasibility study evaluating cost and time

Member of in-house software development team
Joined in-house software development team working in Java and SQL for a variety of clients. My role was primarily optimising in-house process including coordinating testing activities and automating processes execution

Research Fellow
New York University

📅 Nov 2014 - May 2015   📍 New York, NY, USA

Conducted a joint research project with Full Professor Chee Yap on **autonomous navigation and mapping in GPS-denied environments**
- Designed and developed an algorithm for **drones quadcopter** on using the onboard monocular camera to automatically build a reliable map of the area in which the drone is flying. **VISUAL SLAM**.
- Designed and developed image processing APIs in C/C++ for objects recognition and used **OpenCV** (Open Source Computer Vision *Library*)

Software Engineering Intern
Roma Tre University

📅 Dec 2011 - May 2012   📍 Rome, Italy

Designed and implemented software for the **geolocation** of radar maps in order to individuate the composition of the underground using **Android** platform

CERTIFICATIONS AND AWARDS

- **SheHacks-Sydney 2019**: Awarded for Best DataScience App
https://www.linkedin.com/in/engsaravagnarelli/d activity/

- **CLOUDERA, Data Analyst Fundamentals** of data ETL (extract, transform, load), ingestion, and processing with **Hadoop** tools and how **Pig**, **Hive**, and **Impala** improve productivity for typical analysis tasks.

- **C++ programming course**

- **Academic Language Certificates**
English: TOEFL-IELTS-PTE-BULATS-FIRST-KET-PET.
Spanish: DELE Cervantes, Camino Barcelona

LANGUAGES/HOBBIES

- 3D printing **ED-209**
- Arduino 4-wheel Robot
- Amazon AWS Dash Buttons

English, Italian
Spanish

Team: Volleyball, Dance, Karate
Instruments: Piano and Flute