Tessa Smit

CURRICULUM VITAE

SOFTWARE ENGINEER

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EXPERIENCE

Technology Lead   Jul 2022 - Present

Scoutcloud.ai (Alphawave)

Scout required a software engineer and I was thrilled to take on the role of Technology Lead. In this capacity I continued the development of the backend API, which was built in AWS Chalice and involved seamless integration with several other APIs. My management of the app developer team played a key role in fast-tracking the productionization of the app. Drawing on my machine learning knowledge, I also developed a predictive model for business process improvement and increased ROI. I spearheaded the usability testing of the app.

I took on the mantle of driving another product from ideation to execution, which involved meticulous planning, wireframing, collaborating with a graphic designer, and supervising the work of the front-end developer. I was responsible for the development of the backend API and integration with other APIs.

I created a user management console in order to learn Flutter and also contributed to building a meal management app in Flutter. All the projects I worked on were hosted in GitHub and utilized CI/CD. In addition, I had the opportunity to work with Google Analytics (GA4) and a CRM tool.

My versatility shone through when I assisted with sales and represented the company at an organization-wide event. By combining my knowledge of machine learning with my software engineering expertise, I was able to make a significant contribution to the Scout team, playing a key role in the development of cutting-edge solutions that leverage the latest tools and technologies.

Machine Learning Engineer   April 2021 - Present

ByteFuse (Alphawave)

Upon joining ByteFuse as a Machine Learning Engineer, I quickly recognized the opportunity to bring my software engineering skills to the forefront. In this regard, I designed and developed a API using Flask, architected within AWS and utilizing Docker and Terraform to ensure a seamless deployment process.

Additionally, I utilized the latest tools, such as PyTorch and AWS Sagemaker to build machine learning models as part of the ongoing research at ByteFuse.

Software Engineer   April 2018 - March 2021

Sudonum

I started at Sudonum building a keyword detection from transcribed phone calls using Google Speech-to-Text engine. I am responsible for data analytics using Google Data Studio, setting up and maintaining the BI data pipeline. I also created our Sudonum Connector built in Google Apps Script to link clients directly to their data in Google Big Query. I am currently responsible for the project of redesigning and rewriting of our frontend console for clients. Other responsibilities include work on the REST API as well as the voice boxes for bug fixing and product development.

Solutions Engineer

Journey Apps

February 2017 - April 2018

The responsibility of the Solutions Engineer is to develop business process solutions in the form of mobile applications using the JourneyApps platform. This requires an understanding of modeling processes and developing integration solutions using the REST API. Also gained business analytics experience with the creation of dashboards using PowerBI.

Scientific Software Developer

Institute of Mine Seismology

January 2015 – February 2017

Responsible for development of algorithms used in the classification of seismic data recorded in mines, maintaining of the signal processing software and refactoring, as well as implementation on new data.

Teaching Assistant

University of Stellenbosch

February 2013 - November 2014

Applied Mathematics B154: Mechanics for Engineers, Dynamics;
Applied Mathematics 214: Applied Linear Algebra

Analytical Chemist

Vinlab, Stellenbosch

July 2010 - February 2013

Responsible for routine analysis in the laboratory as well as residue analysis using gas chromatography, design of a water bath for cooling and the design and implementation of a nitrogen degassing unit.

Laboratory Technician and Analyst

Origin Wine and Distell, Stellenbosch and Paarl

February 2010 - July 2010

Au Pair

Private family, Mühlenbarbek (Germany)

December 2008 - November 2009

EDUCATION

**Master of Science (MSc)
in Applied Mathematics**   2013-2016

University of Stellenbosch

Majors: Machine Learning, Image Processing

Violin Grade 6   2021

ABRSM

**Bachelor of Engineering (BEng) in
Chemical Engineering,**   2003-2008

University of Stellenbosch

National Senior Certificate   2002

Worcester Gymnasium

Passed with distinction: Afrikaans 1st, English 1st, Mathematics, Physical Science, Accounting, Design

MASTER THESIS

Title

Shark Identification Using the Notches in the Dorsal Fin.

Supervisors

Dr. S.J. van der Walt, Prof. B. Herbst

Description

The serrated edge of the dorsal fin of a shark serves as the shark's fingerprint, unique to every individual shark. Using path finding algorithms to extract this edge, a Hidden Markov model is used to match photographs belonging to the same shark, with the help of a cost matrix.

This method of identifying sharks replaces the laborious method of manual photo identification which in turn serves to more accurately estimate shark populations for conservation purposes.

KEY SKILLS

Preferred Tech Stack

Python
Amazon Web Services
GitHub
JavaScript / Node.js
Flutter

Other Tech

HTML / CSS
Google Cloud Platform
Docker
Terraform
WordPress

PERSONAL SKILLS

Autonomy

I thrive when given the freedom to take ownership of my work and operate with autonomy.

Management Skills

While I possess a strong technical background, I am also committed to enhancing my management skills. I am eager to leverage my technical expertise and problem-solving abilities to effectively lead and inspire others, fostering a culture of excellence that drives innovation and promotes success.

Problem Solving

As a natural problem solver, I relish the opportunity to tackle complex challenges that require creative solutions.

Learn & Grow

My insatiable thirst for intellectual stimulation motivates me to seek out new opportunities to learn and grow, allowing me to adapt to changing circumstances.

Passion

I am a firm believer that passion and pride in one's work are critical components of success. As such, I approach each task with unwavering enthusiasm and strive to consistently exceed expectations.

Teamwork

My ideal work environment is one in which I am surrounded by individuals who share my passion for technology, as I firmly believe that collaborative and innovative teams are essential to achieving transformative outcomes.

REFERENCES

*Full references available upon request