

# Ziyad Jappie

---

## Ziyad Jappie

Johannesburg, South Africa

(+27) 83 407 1972

ziyadjappie@gmail.com

---

## Skills

---

Machine Learning: Research and development (TensorFlow, Keras, Scikit-Learn)

Computer Vision: Research and development (OpenCV, Scikit-Image, MATLAB)

Software Development (Agile - SCRUM, TDD, code reviews)

Web Development (Angular, Javascript, HTML, Spring, Spring MVC, Flask, Hibernate, Maven, Gradle)

DevOps (CI/CD, Docker, Kubernetes, Jenkins, Travis)

Cloud Computing: AWS (Lambda, S3, EC2, DynamoDB, SQS)

Programming Languages: Python, Java, MATLAB, C#, Mathematica, C (CUDA, MPI, OpenMP).

---

## Experience

---

### Omdena / Lead Machine Learning Engineer

July 2019 - August 2019, Johannesburg, South Africa

This was a global outreach program for the United Nations. It consisted of people around the world in a collaborated effort to address this problem.

We were tasked with identifying various crops from satellite images to address the hunger issues apparent in Nepal and India. This helps farmers to improve resource allocation and also accelerate the growth of staple foods.

We used the Google Earth Engine to acquire the raw data and used LabelBox to do the labeling of data which is the area I was assigned to.

We then assessed the type of features needed for accurate model building using 13 different bands within the hyper-spectral images.

### VAT IT / Data Scientist

March 2017 - February 2018, Johannesburg, South Africa

I was apart of the data science team driving innovation within the company. The projects were focused on text extraction and population.

**Therma:** This was a document processing project where we had to create various machine learning algorithms to classify documents in various ways. We also had to create logic to extract information out of the OCR text. We had to then productionize the system as a Spring Boot web service, with other Python-based microservices, all running on the cloud

within Kubernetes. Used DynamoDB, S3, Lamdas, API Gateway, SQS which are available on AWS.

**Email Puller:** Created a system to systematically pull emails, sort them based on the text we extract from the attachments and email bodies, and subsequently populate a database. Their backend code was written in JAVA and used MSSQL database for populating records.

**Forecasting:** Worked briefly on a forecasting model for profit prediction using python (Scikit-learn, keras). The data was pulled from a MSSQL database.

Had an active part in deciding all project designs and architecture to be used throughout the duration of the project's life cycle. Followed Agile methodologies.

## **BSG / Software Developer**

January 2016 - February 2017, Johannesburg

I was part of the junior software developer team. I was placed on two projects during this time:

**Noma:** This was a web application developed to match names to images in a database as an internal project for co-workers to get to know each other. We used Java (SpringBoot), PostgreSQL, thymeleaf, TeamCity.

**Data Warehouse:** Part of a team that worked on a data warehousing project developed in C# with MSSQL. The aim was to collate the data in a neat, legible format so statistical company reports could be generated.

This enabled me to briefly work with the data science team to develop exciting business problems/solutions.

Followed Agile, Test Driven Development, peer/code review methodologies.

## **Student at the University of the Witwatersrand**

January 2018 - March 2020, Johannesburg

**Honours:** my research involved surveying a host of techniques for human and vehicle detection and tracking. The main function of it was to detect vacant parking bays automatically using a camera feed. This was developed in MATLAB.

**Masters:** my research involved finding a novel deep learning architecture, along with classical vision techniques, to perform automatic video summarisation in python, tensorflow. The general overview is to extract important snippets from the video and collate it into a succinct video summary. Technologies and code base used for this was python, keras, tensorflow, scikit-learn, opencv, matplotlib, pandas

---

## Education/Certificates

---

### University of the Witwatersrand / Masters of Science

-Cum laude

2018 - 2019, Johannesburg, South Africa

Computer Science

### University of the Witwatersrand / Bachelor of Science (Honours)

- Cum laude

2015, Johannesburg, South Africa

Computer Science

### University of the Witwatersrand / Bachelor of Science

2011 - 2014, Johannesburg, South Africa

Computer Science, Computational and Applied Mathematics

### Oracle-Pearson / Java OCA

2016, Johannesburg, South Africa

Oracle Certified Associate, Java SE 8 Programmer

### Datarobot / Datarobot Essentials

2019, Johannesburg, South Africa

### Datarobot / Datarobot Time Series Modelling

2019, Johannesburg, South Africa

---

## Machine Learning Communities

---

### IEEE Access Reviewer

2019 - Present

### Deep Learning Indaba / Community Member

2017 - Present

### Omdena / Community Member

2019 - Present

### Rail Lab / Member

2019 - Present

---

## Awards

Certificate of First Class: Algorithms and Artificial Intelligence III, Certificate of First Class: Applications and Analysis of Algorithms, Certificate of First Class: Architecture and Networks, Certificate of First Class: Computational and Applied Mathematics III, Certificate of First Class: Formal Languages and Automata