



Kale-ab Tessera

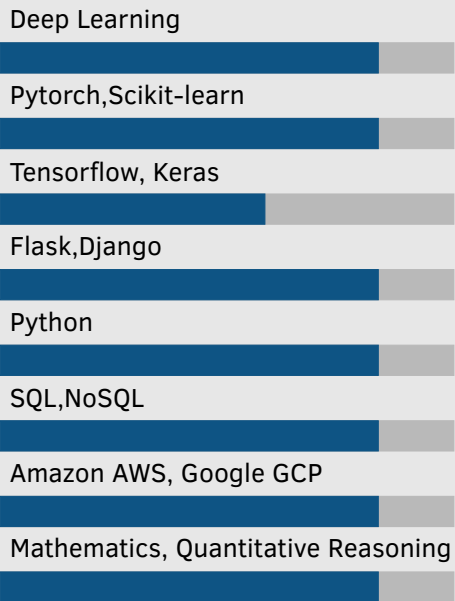
Machine Learning Engineer /Researcher

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About me

Kale-ab is a young, bright and ambitious Machine Learning Engineer and Researcher. He is adaptable and open to learn new concepts in Machine Learning and AI in order to build on his previous knowledge. He considers a great work ethic and his ability to think innovatively as his greatest strengths.

Skills



(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Good Understanding).]

Education

Msc in Computer Science, Focusing on Deep Learning
 2018 - 2019
 University of Witwatersrand
Research
 Title - Learning Compact, General-Purpose Neural Network Architectures.
 Topics - Theory of Deep Learning, Neural Architecture Search , AutoML.
 Lab - Robotics, Autonomous Intelligence and Learning lab.
 Supervisor - Dr. Benjamin Rosman.
Coursework - 86% First year Average.
 Adaptive Computation and Machine Learning, Reinforcement Learning, Robotics, Artificial Intelligence, Large Scale Optimization for Data Science and High Performance Computer and Scientific Data Management.

Honours in Computer Science, Cum Laude
 2016 - 2016
 University of Pretoria
 Honours in Computer Science.

B.Sc. Computer Science
 2013 - 2015
 University of Pretoria
 The BSc (CS) degree emphasises the understanding of computer science fundamentals by offering a wide variety of computer science and mathematics courses.

PEPPS College
 2008 - 2012
 Polokwane
 IEB Private School.

Research Committees

Black in AI
 2017, 2018
 Reviewed papers in Machine Learning.

Research

- Presented a Spotlight talk at the Deep Learning Indaba 2019 - slides.
- Presented a poster at the Deep Learning Indaba 2019 - poster.
- Presentation on Neural Architecture Search for the Robotics, Autonomous Intelligence and Learning lab - slides.
- Presented a poster at MLSS London, 2019.

Honours and Awards

Microsoft Prize - Best Poster at Deep Learning Indaba
 2019
 Deep Learning Indaba
 I received the prize for the best poster at the Deep Learning Indaba. This was the top prize out of 194 posters.

Travel Award to attend Deep Learning Indaba
 2019
 Deep Learning Indaba
 I received a travel grant and accomodation award to attend the Deep Learning Indaba in Kenya.

Full scholarship to attend MLSS London
 2019
 MLSS
 I received a full scholarship to attend Machine Learning Summer Schools (MLSS) London. This competitive summer school had a 11.75 % acceptance rate (1,200 applicants for 140 places) and of 140 attendees, only 21 % were MSc students.

Postgraduate Merit Award
 2019
 University of Witwatersrand
 Was awarded a Postgraduate Merit Award based on academic merit.

Academic Honorary Colours
 2017
 University of Pretoria
 Was awarded Academic Honorary Colours by the Student Representative Council of the University of Pretoria.

Honours Cum Laude
 2016
 University of Pretoria
 80.75 % Average for Honours in Computer Science.



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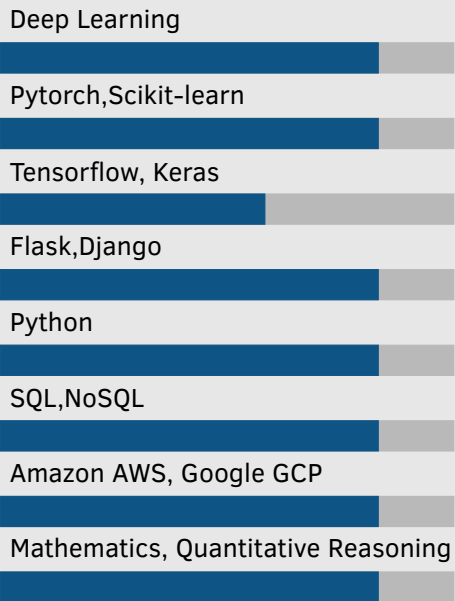
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Amazon Prize for Best Mobile Application - COS 301 Final Year Software Engineering Project

2015

Amazon, University of Pretoria
Project involved creating a website and Mobile App that uses Computer Vision to automatically identify and tag species of Stink Bugs.

Golden Key Honour Society

2013-2015

University of Pretoria
Was selected to join the Golden Key Honour Society as a result of being in the top 15% of my degree.

Merit Certificate for Leadership

2015

University of Pretoria
I received this reward for leadership during my time as a House Committee member at House Boekenhout.

Matric Academics

2012

PEPPS College
Notable achievements include being in the Top 1% of IEB IT Matric Students and receiving 7 Distinctions with an average of 87%.

Deputy-Head Boy

2012

PEPPS College
Was selected as deputy-head boy of my school in my matric year.

Academic Honours and Cultural Colours

2012

PEPPS College
Academic Honours were awarded for receiving Academic Colours (average above 80%) three years in a row. Cultural colours were awarded for excellence in various cultural activities such as chess and newspaper editing.

Leadership

- Secretary, Head of IT and Communications- Boekenhout Residence, University of Pretoria.
- Deputy-head boy - PEPPS College.

Summer Schools

Deep Learning Indaba

2019

- I was the Front-End architect for the Applications system - Baobab.
- I was selected as a tutor for the following advanced level practicals - build your own TensorFlow, optimisation for deep learning, convolutional networks and recurrent neural networks.

MLSS London

2019

- The Machine Learning Summer School (MLSS) is a 12-day event where participants take intensive courses on a variety of topics in machine learning, ranging from optimization and Bayesian inference to deep learning, reinforcement learning and Gaussian processes.

Deep Learning Indaba

2017, 2018.

- One week intensive Summer School covering state of the art techniques in Machine Learning and AI.

Experience

Machine Learning Engineer

April 2019 - Present Multichoice
Using Machine Learning to model and predict the behaviour of over 15 million customers.



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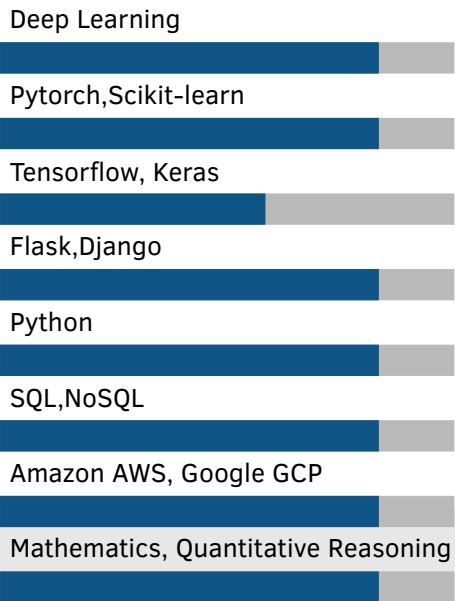
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Intermediate Software Engineer

Oct 2017 - March 2019 Entelect
Full Stack Development:
- Front-End: React, Redux, Redux Saga, Jest and Enzyme.
- Integration Layer/Backend: Spring Boot, Maven.
- Databases: MongoDB.
- DevOps: Docker, Openshift, Jenkins, Linux.
- Data : I was tasked with managing a data catalog of tens of thousands of Mobile Phones (at Cell C). I had to collect this data from external sources via APIs, clean the data via automatic scripts, backup and recover the data using mongodump and provide search functionality on the data.

Software Engineer

Jan 2016 - Oct 2017 RetroRabbit
Full Stack Development:
- Front-End: Angular JS 1 , React and Redux.
- Integration Layer/Backend: .NET MVC 4.5.2, .Net Core 1.1 .
- Databases: SQL Server, MySql.
- DevOps: Amazon AWS - EC2 and RDS instances, Web Servers (IIS).
- Data : I had to write advanced SQL stored procedures and functions, which ran efficiently on large data.

Internship

Sept 2015 - Nov 2015 RetroRabbit
Learned about various interesting topics including Source Control, Cloud Computing (Amazon AWS) and IoT.

2 weeks vacation work

July 2015 - July 2015 BBD
Requirements - Android Application, use of .NET MVC 4.5 Framework for the back-end and management of a SQL Server database.

House Committee Member, Secretary, Head of IT and Communications

Sept 2014 - Sept 2015 University of Pretoria
I helped lead and mentor various residence, especially those who had academic difficulties and/or technical IT related issues.

Teaching Assistant, COS 212

Feb 2015 - Jun 2015 University of Pretoria
As a teaching assistant for Data Structures and Algorithms it was crucial to identify and recognize all the classical data structures; implement them in different ways; know how to measure the efficiency of implementations and algorithms.

Teaching Assistant, COS 110

Jul 2014 - Dec 2014 University of Pretoria
As a teaching assistant for Program design and Programming techniques, it was crucial to have good knowledge of object-oriented programming, inheritance, polymorphism, operator overloading, memory management and encapsulation.

Skills

- Languages: Python, Java , Javascript, C# .
- Frameworks: Pytorch, Scikit-learn, Tensorflow, Keras, Flask, Django, Spring Boot, .Net Core, React.
- Devops : Amazon AWS (EC2 and RDS), GCP, Docker, Openshift, Jenkins, Linux.
- Databases: Mongo, SQL Server and MySql.

Online Courses

- Introduction to Python for Data Science- Edx
- Machine Learning by Stanford- Coursera