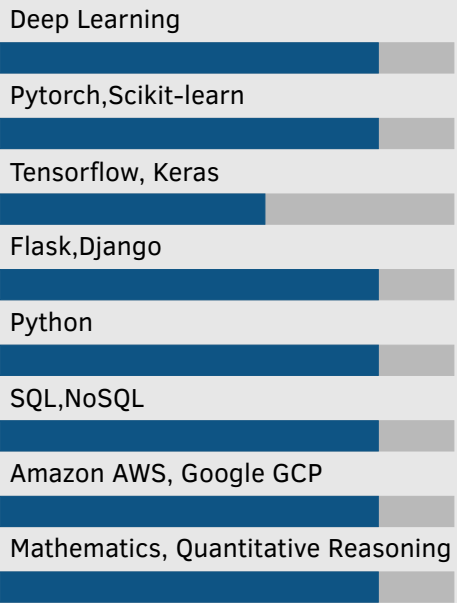# Kale-ab Tessera

Machine Learning Engineer /Researcher

☎ +27 766806878

🌐 kaleabtessera.com

@ kaleabtessera@gmail.com

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 ——

Deep Learning

Pytorch,Scikit-learn

Tensorflow, Keras

Flask,Django

Python

SQL,NoSQL

Amazon AWS, Google GCP

Mathematics, Quantitative Reasoning

(*)[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

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.

Amazon Prize for Best Mobile Application - COS 301 Final Year Software Engineering Project   2015
Amazon, University of Pretoria
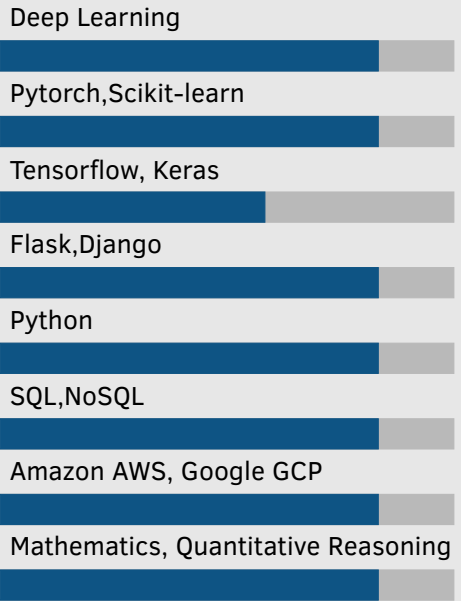Project involved creating a website and Mobile App that uses Computer Vision to

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 (see topics).

Deep Learning Indaba   2017,2018.

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

Experience

Machine Learning Specialist
April 2019 - Present   Multichoice
Modeling and predicting the the behaviour of over 15 million customers.

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.
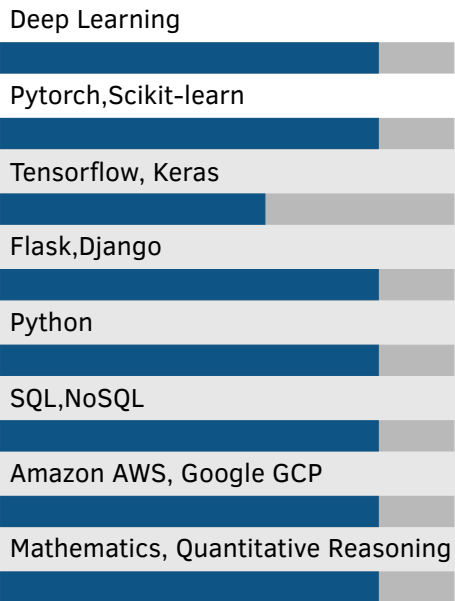
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Software Engineer

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 backend 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