

Dean T. Kayton

SOLUTIONS ARCHITECT

Cape Town, South Africa

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Summary

A versatile technologist, motivated to learn and adopt promising new technologies, possesses technical depth in back-end development, QA, Automation, DevOps, Machine Learning and Cloud Deployments. Has interfaced with a variety of fields such as Transportation Engineering, Unified Communications, Web Analytics and Bioinformatics.

Experience

Self-employed

Manguzi, South Africa

FREELANCER

Mar. 2019 - Dec. 2019

- Relocated in support of partner posted to rural hospital. Maintained Bioinformatics role and gained 2 additional clients, worked fully remotely
- Managed conflict in an informative and friendly manner, resulting in increased understanding and collaboration towards a better solution
- Outsourced front-end work on behalf of client, this resulted in a higher quality product, quicker delivery and a satisfied client
- Built stronger communication and negotiation skills in estimating delivery and compensation thereof

HIV Diversity group, Div. of Medical Virology, Dept. of Pathology, University of Cape Town

Cape Town, South Africa

BIOINFORMATICIAN

Oct. 2018 - Dec. 2019

- Designed and implemented a Django based sequence database, allowing sequences to be filtered according to associated metadata
- Performed Machine Learning research proposal feasibility study in which funding was granted
- Wrote a pipeline in Julia and Python for processing DNA sequence information, generating an automated report
- Maintained Django based system used to manage HIV sample storage, extended to correctly track locations and incoming shipments

OpenDNA

Cape Town, South Africa

BACKEND ENGINEER

May. 2017 - Oct. 2018

- Drove adoption of DevOps culture amongst team, making ops tasks a shared and automated process where applicable
- Produced centralized logging system where logs were sent to Elasticsearch via Kinesis, eliminating performance problems at peak traffic
- Tuned Apache Storm to perform at a desirable throughput, with back-pressure properly configured at peak traffic
- Containerized services using Docker to simplify configuration and allow developers to replicate production environment closely
- Developed automated Jira issue handling, aiding QA and management to track relevant stories and their deployment status

VOSS

Cape Town, South Africa

SOFTWARE QUALITY ASSURANCE ENGINEER

Jul. 2015 - May. 2017

- Managed automated test coverage and CI/CD, extending Python based framework with functionality as required
- Drove team discipline to follow best practice git strategies and treatment of virtual machines as ephemeral, eliminating unreproducible changes
- Mentored intern with little technical background, who secured permanent position in QA (remained in position for over 2 years)
- Solved compatibility issues of GNU/Linux users using Webex to connect to meetings, by building and hosting a Docker container
- Introduced staging environments which enabled developers to contribute to automated tests, distributing QA responsibility amongst team
- Gained technical knowledge of the Microsoft Skype for Business and Exchange products, often approached for insight

Trafficon

Cape Town, South Africa

TRANSPORT ENGINEER

Aug. 2014 - Jul. 2015

- Produced road traffic micro-simulation models and presentations that demonstrated traffic problems and their solutions
- Learned Python to build bespoke logic into model, allowing simulation of minibus departure and indoor multi-story parking systems

Top Choice Admissions

Cairo, Egypt

UNIVERSITY ADMISSIONS CONSULTANT AND MATHEMATICS TUTOR

Jan. 2014 - Jul. 2014

- All students showed improvement and successfully produced required grades and application for successful university admission

Education

Durham University

Durham, United Kingdom

MEng(HONS) CIVIL ENGINEERING

Oct. 2008 - Jul. 2013

- Thesis: Genetic algorithms applied to the optimization of steel space-frame roof structures

Certificates

Jul. 2019 **Machine Learning**, Stanford|Online

Coursera, Online

Nov. 2016 **Machine Learning Foundations: A Case Study Approach**, University of Washington

Coursera, Online

Aug. 2015 **6.00.1x: Introduction to Computer Science and Programming Using Python**, MITx

edX, Online

Tech Interests

Nov. 2019, actively pursuing Reinforcement learning (RL) by self studying seminal RL book by Sutton and Barto, together with the associated RL Coursera Specialization. May. 2018, I entered the retro contest hosted by OpenAI (placed 32/229). Realized I needed a more foundational knowledge about the algorithms to compete. Been following the field ever since. Spinning Up provides me with a convenient platform to experiment with practical applications. I am also exploring application of Deep RL to micro-simulations using FLOW by UC Berkely.

Enthusiastic about the architecture of JAMstack. I have set up personal websites for small business communities with little access to tech skills using Hugo static site generator and NetlifyCMS.

Additional Activities

I gain great reward adapting to life in unfamiliar locations around the world. The confidence required to embrace what is outside my comfort zone becomes reinforced by learning from unfamiliar and often uncomfortable experiences. As a result, interpersonal skills are developed that can be applied directly to challenges faced in employment.

Oct. 2019, Certified PADI open-water scuba diver. Successfully completing the course proved an ability to think methodically under pressure.

2009 - 2012, Officer Cadet at Northumbrian Universities University Officer Training Corps. Completed Royal Military Academy Sandhurst (RMAS) Military Leadership Development Programme 1 (MLDP1). Developed focused concentration in demanding environments and effective communication within a multi-team unit. Tested in military strategy, weapon handling, first aid, navigation and military section management.

Languages & Technologies

Tools & Technologies	AWS-CLI, Ansible, Docker, Git, Gitlab CI, GNU/Linux, JMeter, Jenkins, Packer, Singularity, Terraform, Vagrant
AWS Services	Cloudwatch, EC2, ECR, ECS, IAM, Lambda, Kinesis, RDS, SNS, SES, S3
Other Services	Apache Storm, Caddy, Elasticsearch, Grafana, Kibana, Logstash, MySQL, Nginx, OpenVPN, PostgreSQL
Programming	Python, Bash, PowerShell, Julia, MATLAB, Octave
Frameworks and Libraries	Django, DocOpt, Hugo, Matplotlib, NetlifyCMS, Numpy, Pandas, PyTest, SciKit-Learn
Languages	English