

Thuso Standish Simon

Sr. Data Scientist | Sr. Data Analyst

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Profile

Thuso is an experienced data scientist with broad application of skills in data analytics, data mining, data storytelling, bayesian statistics, machine learning, and deep learning in fast growth, financial, and scientific environments.

Work Experience

Head of Data at Technoponies

Jun 2020 - Present

Sr. Data Scientist at Jumo World, world's largest microlender

Nov 2018 - Jun 2020

- Lead Data Scientist on core business product, overseeing and developing junior staff
- Optimized lending models for end-to-end scoring and PM using modern machine learning techniques; defined metrics to evaluate models in production; discovered prior errors in credit scoring which uncovered \$1M in imminent loss on active accounts
- Helped bring multiple interdisciplinary teams on a learning mission to better digest and utilize proprietary data and to optimize our products
- Helped build a feature discovery and modeling pipeline that reduced model development time from months to two days.

Data Scientist at I Love Zoono, fast growth mobile money startup

Apr 2015 - Sep 2018

- Worked cross functionally and with external stakeholders to shape major business initiatives during ambitious transition from a peer to peer cash transfer service to full financial platform

Product Optimization

- Lead Data Scientist for the company's first credit product, produced and deployed credit scoring model and created analytical capability for product.
- Created an optical character recognition (OCR) model using neural networks to verify identity with non-standard documents through mobile app (tribal letters, national IDs)
- Used natural language processing (NLP) to categorize thousands of unique cases from Salesforce into 5 common call center encounters improving live data pattern recognition

Risk Management

- Used network analysis to detect fraud rings
- Created a consumer churn model using recurrent neural networks
- Create an anomaly detection model to tell if entrepreneurs we in danger of going out of business and interfaced into Salesforce so field agents could respond in time
- Used GPS data to predict if entrepreneur's shops were in optimal places

Financial Planning & Analysis

- Created a revenue forecast model with a 5%, 10%, and 12% error rate after 1 month, 3 months, and 1 year. This model, named CHAD, was featured in a blog by the CFO [here](#)*
- Created a scenario planning model from revenue forecasts using Monte Carlo simulations
- Created daily, weekly, and monthly predictions of seasonal variation to standardize

*<https://medium.com/positive-returns/unit-economics-a-must-have-at-all-stages-of-a-startup-ed883ea138c4>

growth targets

Technical Skills

Machine Learning: classification, regression, clustering, neural networks, feature engineering

Statistical Methods: Bayesian statistics, time series, regression models, hypothesis testing and confidence intervals, A/B testing, experimental design, dimensionality reduction, Monte Carlo simulations, power analysis

Other: GIS, AWS, system administration, docker, image processing, web scraping, SOQL, Parallel processing, CUDA/OpenCL, Public speaking, data visualization, Excel, MSWord

Education

Doctorate of Philosophy (*Candidate*)

Astrophysics, University of Cape Town, South Africa

July 2011- 2015

I worked on hierarchical bayesian methods to determine the age and distance of millions of galaxies.

Master of Science

Astrophysics, University of Cape Town, South Africa

Feb 2011

I developed novel frequentist and bayesian methods to detect short period signals in X-ray time series data.

Bachelor of Science *Magna Cum laude and honors*

Astrophysics, University of New Mexico

May 2008

Programing Experience

Python (PyData stack):	Expert	Linux/Unix:	Intermediate
Bash:	Expert	Matlab:	Intermediate
Git/SVN:	Intermediate	R:	Beginner
Docker:	Intermediate	C++:	Beginner
SQL:	Expert	Tableau:	Intermediate

Hobbies and Other interests

I am the president of the Cape Town Machine Learning meetup group which gives monthly data science talks. I am an avid homebrewer and love to experiment with food. I love to hike and use gardening as an escape to nature and for more food experiments.