

Dr. Chris Fourie



Research Engineer
Health Data Scientist
Machine Learning Engineer
Software Engineer

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




















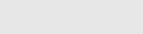

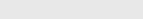
Social & Repos

-  <https://za.linkedin.com/pub/chris-fourie/79/9ab/952/>
-  https://gitlab.com/users/chris_fourie/
-  <https://github.com/Chris-Fourie>

Languages

- English 
- German 

Skills

-  Teamwork, leadership 
-  Health data 
-  Python 
-  Numpy, Pandas, SciKit 
-  PyTorch 
-  PyCUDA, MPI4Py 
-  OpenAI Gym, OpenCV 
-  Java 
-  C code 
-  JavaScript 
-  Git 
-  Linux 
-  Postgresql, Database 
-  Docker 
-  Apache Airflow 
- AWS
- Saltstack

Work experience

- 2020 – now **Research Engineer and Health Data Scientist** (LifeQ)
Full time Working on projects related to analysis of time-series health data, machine learning and data pipelines
- 2020 **Machine Learning Engineer and DevOps** (DataProphet)
Internship Worked on projects related to continuous development of data-pipelines for machine learning in manufacturing.

Companies

- 2014 – now **Director and Founder at South African Medical Students Association (SAMSA)** (NPC) (2014/105023/08)
Connected medical students across South Africa and internationally. Concurrently led 5 remote teams around South Africa of 5-8 medical students.
- 2014 – now **Director and Founder at Babaza Textiles** (PTY)LTD (2014/199093/07)
Original creative garments for the medical industry. Coordinated the development of an online sales platform and production pipeline.

Education

Postgraduate Training

- 2019 – 2020 **Masters in Computer Science** (University of the Witwatersrand)
(Expected) Courses in Machine Learning, Robotics, High Performance Computing, Algorithm Analysis, Computer Vision and Reinforcement Learning with research related to machine learning, theoretical / computational neuroscience and multi-agent reinforcement learning.

Undergraduate

- 2017 – 2018 **BSc Engineering** (University of Salzburg & Technical University of Munich)
First semester completed (in German) of Joint Degree Bachelorstudium Ingenieurwissenschaften. Discontinued for move to computer science
- 2009 – 2015 **Medical Degree** University of the Witwatersrand
Courses in physics, chemistry, biology, statistics, system dynamics, physiology, pathology, microbiology, pharmacology and anatomy with clinical training in all major medical and surgical domains. Rotations through Baragwanath, Helen Joseph, Charlotte Maxeke and Klerksdorp Hospitals.

Schooling

- 2004-2008 High School – St John's College, South Africa
- 1999-2003 Middle school – St John's Preparatory School, South Africa

Publications

- 2018 **Essentials of Global Health Text Book**
Co-Author of chapter on Trauma and Injury. British Medical Journal Book Awards, 1st place in Public Health division. [link]
(Elsevier, edited by Parveen Kumar)

Selected Projects

- ML Semantic Segmentation for Histopathology [notebook], [report]
- HPC Distributed Deep Learning [repository]
- Robotics SLAM with Kuri [repository], [video]
- Algorithms Recursive algorithms - find max sub-array [repository]
- RL Dynamic Programming [repository]

For a full list of projects please visit <https://chrisfourie.africa>

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About Me

Medical doctor turned health data scientist, trying to use the powers of AI for social good. Currently busy with a Computer Science masters and interested in research at the intersections of theoretical / computational neuroscience and machine learning.

Interests



Non-profit, administration and policy-making

2015 – now SAMSA advisory committee member
2014 – 2015 Chairperson of SAMSA (International Federation of Medical Student Associations (IFMSA) President, South Africa)
2009 – now Golden Key Member
2007 – 2008 Member of the Johannesburg Junior Council

Conference, international academic experience

2020 Deep Learning IndabaX South Africa, University of Pretoria (organising committee)
2020 African Institute for Mathematical Sciences (AIMS) African Machine Learning Masters (AMMI) Rwanda, Reinforcement Learning Course (tutor)
2019 Deep Learning Indaba, Kenyatta University, Nairobi Kenya (attendee)
2019 Deep Learning IndabaX South Africa, UKZN Durban (attendee)
2019 IBRO-Simons Computational Neuroscience Imbizo / Summer School (attendee fully funded)
2014 South African Medical Association(SAMA) annual conference (student delegation leader)
2013 IFMSA General Assembly, Tunisia (South African delegation leader)
2013 SAMA annual conference (student delegation leader)
2013 Academic Observership at Hospital for Special Surgery, New York
2011 Anaesthetics elective at Somerset Hospital, Cape Town

Extra-Curricular Activities

Outdoors I enjoy long-ish walks in the mountains and will board down any snowy stretch of hillside that happens to be nearby. A member of Club Maluti and the Wits Snow Ski Club, mountain enthusiasts on both accounts. Hiking, rock climbing and trail running.
Indoors Always keen for a game of Squash. Enjoy board game evenings. Big on reading, especially speculative fiction / sci-fi, Greg Egan, Peter F. Hamilton and Dennis Taylor.
Educational Recreational language learning. Cooking, sometimes baking. I enjoy sketching too.

References

Supervisor **Dr. Benjamin Rosman** University of the Witwatersrand
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