JOSHUA BRUTON

Shenzhen, China

Website ◇ LinkedIn ◇ GitHub ◇ joshuadbruton@gmail.com ◇ English and Chinese

CURRENT GOAL

Seeking a challenging position in an organisation that offers opportunities for professional development and mentorship. Working with or building a supportive development team that produces sustainable and valuable solutions.

EDUCATION

Doctor of Philosophy, Computer Science — *September 2024 - Present*
University of the Witwatersrand, Johannesburg

Master of Science, Computer Science — *February 2020 - December 2021*
University of the Witwatersrand, Johannesburg — Overall Percentage: 81%

Bachelor of Science (Hons.), Computer Science — *February 2019 - November 2019*
University of the Witwatersrand, Johannesburg — Overall Percentage: 88%

Microsoft Technology Associate: Software Development Fundamentals — *November 2019*
Microsoft — 89%

Bachelor of Science, Mathematics and Computer Science — *February 2016 - November 2018*
University of the Witwatersrand, Johannesburg — Overall Percentage: 69%

Matric — *Beginning of time - November 2015*
Curro Aurora Private School — Bachelor's Pass

SKILLS AND TOOLS

Full-stack Development	C#, MSSQL, & PgSQL
Machine learning	Python & PyTorch
DevOps	Azure, Docker, & Nginx
Robotic Process Automation	Selenium & HangFire
Data Analysis	Power BI/Microsoft Fabric

EXPERIENCE

Elucidate AI & SMD Technologies — April 2022 - Present
Technical Lead

· Promoted and hired on retainer by SMD Technologies as their Technical Lead in March 2024. I managed a global team of 5 software developers, both in-office and remote, in South Africa and China. Our team developed a Logistics, Product, Factory, and Workflow management system to improve the efficiency of SMD's Shenzhen Office. The system is now used by the entire organisation, supporting over 250 concurrent users and tracking over 50,000 products.

Consulting Data Scientist and Software Engineer

· Leading the development of an internal workflow management system in ASP.NET Core hosted in Azure, in-production time series analysis and forecasting to suggest orders and predict sales in Python, automating commission calculations for the sales divisions in SQL, and designing web scrapers in Selenium to track online advertising revenue and buy-box auctions. This system has tracked over R100 million in e-commerce sales.

United Nations
Data Consultant October 2021 - March 2022

· Data consultant contracted to the South African Revenue Service: I analysed and maintained MSSQL databases with billions of records. Additionally, I compiled reports on and identified multiple instances of tax fraud.

Educess
Full-stack Engineer & Co-founder 2020 - 2022

· Co-founder of Educess, a profit-generating EdTech startup with more than one thousand users and fifty thousand rand in revenue. I lead the development of our web application and the on-boarding of our technical team.

University of the Witwatersrand
Honours and Masters Tutor 2019 - 2021

· Head tutor for Advanced Analysis of Algorithms, Adaptive Computation and Machine Learning, and Database Fundamentals. Invigilating exams and marking tests for Mathematical Foundations of Data Science.

Microsoft Brighter Futures Tuition
C# Lecturer 2020

· Instructed high school students at several schools towards the attainment of the Microsoft Technology Associate certificate. My lectures are available on YouTube.

MWR InfoSecurity
Information Security Intern June 2018

· An internship focused on the security of web applications. Included instruction in SQL Injection, Kali Linux, and cyber security best practices.

University of the Witwatersrand
Instructor February 2018 - May 2018

· Designed and instructed a 9-week introduction to Linux course, supervised by Professor Turgay Celik.

University of the Witwatersrand
Elected Physics Student Representative 2016

· My responsibility was to communicate student concerns to the lecturers.

PUBLICATIONS

Translated Skip Connections - Expanding the Receptive Fields of Fully Convolutional Neural Networks
Published at the International Conference on Image Processing
Dictionary Learning for Clustering on Hyperspectral Images
Published in the Springer Journal of Signal, Image, and Video Processing

ACHIEVEMENTS

Dean's list, denoting top 5% performance in the faculty of science at the University of the Witwatersrand during my honours' program

"Best Project in Computer Science" for "Dictionary Learning for Clustering on Hyperspectral Images", I was also 3rd best student in Computer Science class of 2019

First place in the Centre for High Performance Computing's 2017 National Conference and third place in the International Student Cluster Competition. Competitions in which teams from around the world construct and benchmark high-performance clusters.

Received the Postgraduate Merit Award, a full, merit-based scholarship for postgraduates at the University of the Witwatersrand.

Huawei Research Incentive Prize for "SnakeNet: A Convolutional Neural Network for Competitive Snake Game".

Member of the Golden Key International Honours Society, denoting top 15% performance in my degree program

PORTFOLIO