ANDI QU

I Build Stuff

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EXPERIENCE

Undergraduate Research Assistant
USAF-MIT AI Accelerator

📅 Dec 2021 – Ongoing 📍 Cambridge, MA

Use Unity and reinforcement learning to develop AIs to assist human pilots

Undergraduate Research Assistant
MIT Computer Science and Artificial Intelligence Laboratory

📅 Sep 2021 – Ongoing 📍 Cambridge, MA

Use the Z3 theorem prover to design an experimental hardware compiler

Junior Developer
Business Science Corporation

📅 Jan 2021 – Aug 2021 📍 Johannesburg, South Africa

- Created an internal Excel add-in for tracking project revenue and employee allocations using Office.js and Azure functions
- Helped build automation tools for Rand Merchant Bank and Woolworths using Angular and ASP.NET
- Created data visualizations for Imperial Logistics using Plotly to optimize fuel spend

Core Team Member
USACO Guide

📅 Jun 2020 – Dec 2021

- Write solution analyses for the practice problems presented in the guide to help students excel in USACO contests
- Co-author learning modules for topics like the Knuth-Morris-Pratt algorithm used in the Gold and Platinum divisions

EDUCATION

Bachelor's Degree
Massachusetts Institute of Technology

📅 Sep 2021 – Ongoing 📍 Cambridge, MA

Majoring in computation and cognition

High School
St John's College

📅 Jan 2016 – Dec 2020 📍 Johannesburg, South Africa

96.4% GPA (dux scholar) and 8 distinctions in final exams

ABOUT ME

I am a passionate and creative college student seeking a career in computer science. I am interested in learning more about UI/UX design, programming language theory, and program synthesis

AWARDS

International Olympiad in Informatics bronze medal
2020 and 2021 – Singapore

International Mathematics Olympiad bronze medal
2020 – St Petersburg, Russia

South-African Programming Olympiad winner
2019 and 2020

South-African Mathematics Olympiad winner
2017 and 2020

Pan-African Mathematics Olympiad silver medal
2019 – Cape Town, South Africa

Google Code-In grand prize winner
2018 – Apertium

SKILLS

C++ Mathematical problem-solving
Competitive programming Git

Python Django Flask
Plotly Pandas Discord.py

JavaScript AngularJS React

C# Azure Functions Unity
EF Core Blazor ASP.NET

Rust Yew Rocket

Lisp Racket Z3 theorem prover