

# MICHAEL ANTUNES

HONOURS BSC ELECTRICAL ENGINEERING

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[Github Account](#)

## EDUCATION

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### University of Witwatersrand

2020–Present

- Honours in Bachelor of Electrical Engineering (Information)
- Received Certificate of Merit for ranking in the top 2% of students in Engineering Mathematics IB
- Received University Council Merit for being in the top 10% of applicants to the University of Witwatersrand

### Relevant Courses

2020–Present

- Software Development (A+), Mathematics II (A+), Electric Circuits (A), Physics II (A), Signals and Systems (A), Data Structures and Algorithms(A+), Data Intensive Computing in Data Science (A), Secure Computing (A), Computational Mathematics (A+)

## ABOUT ME

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**Technical Skills** C/C++, Python, Javascript, Java, Unix/Linux, MATLAB, Data Visualisation, Scikit-learn, Spark

**Languages** English (first language), French and Portuguese (advanced intermediate)

**Interests** Neural Networks, AI Crypto Trading, Options Trading

## WORK EXPERIENCE

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### Hatch App

Full-Stack Engineer, Software Developer

January 2022 - February 2022

- Accomplished an 85% increase in productivity across 3 cross-functional teams by designing and implementing an efficient ReactJS-based admin system to streamline user account reviews.
- Designed and implemented new functionality for 5 admin-related interfaces using ReactJS and Firebase API requests, significantly improving the ease and efficiency of deploying changes.
- Developed a tag-management system using ReactJS, CSS, SQL and Firebase API requests, resulting in a 25% reduction in tag-related support requests through intuitive tag modifications.
- Boosted efficiency and success rates by 15% through active collaboration in daily GitHub deployments, pull requests and testing

## PERSONAL PROJECTS

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### SkillMineX

May 2023

- Implemented TF-IDF feature engineering using PySpark and scikit-learn to extract insights from job requirements text, improving clustering accuracy by 75%.
- Programmed K-means text clustering analysis on a large-scale dataset using PySpark, achieving a 110% reduction in processing time.
- Performed visualisations using PySpark's K-means text clustering, Matplotlib, SQL, and Pandas to provide insights into various job trends.

### CoinFinance

August 2022

- Data-mined real-time cryptocurrency prices from Crypto.com, Luno, and Binance exchanges using RESTful APIs, facilitating identification of arbitrage opportunities and enabling optimised trading decisions.
- Developed dynamic portfolio valuation functions to calculate real-time asset values across multiple exchanges, empowering users to assess investment performance, devise data-driven strategies, and achieve improved ROI.
- Implemented asynchronous requests to reduce data retrieval latency by 60%, enhancing arbitrage opportunity identification and profit maximisation.

### Simplify

November 2021

- Developed an efficient Python web scraping bot using Selenium to automatically retrieve new documents from the Wits University website, resulting in a significant 60% reduction in manual search time
- Devised and deployed a Python algorithm with BeautifulSoup to scrape external links from the Wits website, leading to a 50% decrease in time spent searching for due dates, marks, and announcements.