

LUCAS BARBOSA

ENGINEERING (HONOURS) AND COMPUTER SCIENCE

lucas.brsa@hotmail.com

maybelucas.com

github.com/lucasbrsa

linkedin.com/in/lucasbrsa/

ABOUT ME

Technical Skills React, NodeJS, Typescript, MongoDB, Postgres, Python, PHP, C/C++, Linux Servers, DevOps
Languages Fluent in English and Portuguese
Interests Finance, Cinematography, Surfing, Design, Poker, Tennis

WORK EXPERIENCE

Full Stack Software Engineer

Progue Chartered Accountants Pty Ltd

Sydney, NSW (July 2021 – April 2022)

- Automated manual micro-services to optimize tax accountancy workflow, reducing the amount of non-billable hours.
- Built a platform using the MERN stack (with TypeScript) to create an ecosystem for cutting-edge productivity applications tailored to the business and deployed to a VPS with a CI/CD pipeline.
- Parsed the XML of 800+ page word documents into a MongoDB database for fast text-based search and PDF export features.

Frontend and Product Developer

Cercle

Sydney, NSW (August 2021 – April 2022)

- Built a QR Scanner web app based on Figma User flow diagrams with React and Redux to work with a Flask backend. Deployed the web app to the internet using AWS EC2.
- Conducted User tests in person by approaching customers at a Cafe who showed interest, collecting their feedback systematically.
- Worked on conceptualising new ideas for future iterations of the product in a highly collaborative startup environment.

Additional Experience

Sydney, NSW (2017 – 2021)

- Cocktail Bartender (Bella Vista Hotel, Bella Vista)
- Bartender (The Marsden Brewery, Marsden Park)
- Beverage Attendant (Reading Cinemas, Rouse Hill)
- Sales Representative (Apex Alliance, Sydney)
- Sales and Shop Assistant (Surf Dive n Ski, Castle Hill)
- Private Tutor (Hills District and Broader Sydney)

EDUCATION

University of New South Wales

Sydney, NSW (2019 – Present)

- Engineering Honours (Mechatronic) and Computer Science (Artificial Intelligence)
- HD WAM average for Computer Science

PERSONAL PROJECTS

Personal AI Assistant

Stack: Nodejs, Python, Pandas, GraphQL, Postgres

- Applies Boltzmann's Entropy formula over multiple social signals (calendar events, to-do lists etc.) to estimate weekly and monthly levels of disorder/anxiety.
- Uses GraphQL to collect data from 6+ APIs and model them into micro-states as input to the above algorithm.
- Data is normalised and cleaned with Pandas from a Flask server with a process manager.

Crypto HFT Algorithm

Stack: Python, Pandas, Google Cloud

- Fetches real-time crypto pricing data from the Binance Exchange with asynchronous Web sockets into a SQLite database. Data is cleaned with Pandas.
- Applied indicators (e.g. MACD, Vortex etc.) with other quantitative trading strategies to execute real-time market orders from a Python server.
- Built a CI/CD pipeline that backtests the algorithm against large historical datasets to maximise alpha and efficiency before live deployment.