

Marcel Masque

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EDUCATION

Monash University – Graduating 2022 - **Bachelor of Computer Science Advanced (Honours)**

GPA: **3.92/4.00** | Weighted Average Mark: **86.5%**

Western Australian Certificate of Education | 2018 | Australian Tertiary Entrance Rank (ATAR): **99.80**

SKILLS

Python, Swift, MATLAB, Java, C++ | Agile – Freedcamp/Jira

EXPERIENCE HIGHLIGHTS

MONASH UNIVERSITY, Melbourne, Australia, November 2019 - Present

Research Intern

Explore the use of Optimal Nonlinear Recursive Predictors and Autoregressive Models of intracranial brain data in an effort to study the Neural Correlates of Consciousness.

- Design and analyse neuronal models to find the optimally informative spatiotemporal scale at which to analyse brain data.
- Perform data analysis of human brain EEG data using conventional and experimental techniques to test hypotheses on the non-Markovian properties of brain activity during face perception.
- Produce explanatory reports and present findings to the research lab concisely.

MONASH NOVA ROVER, Melbourne, Australia – September 2019 - Present

Software Engineer

Active member of a student team building a rover to compete in the University Rover Challenge, an international robotics competition.

- Implement core software systems, focusing on sensor integration (GPS, IMU) in a compact, standardised design using ROS.
- Design an autonomous mapping solution using an Extended Kalman Filter based Simultaneous Location and Mapping Algorithm to allow the rover to traverse a rocky desert autonomously.
- Work effectively in an Agile environment, utilising Jira and Freedcamp, as part of a 60-person team.

CLUEY LEARNING AND IECE TUTORING Melbourne, Australia, March 2019 - Present

Online Mathematics Tutor

Teach personalised mathematics courses to students in Years 4 through 12.

- Explain complex mathematical terms and concepts and work through questions individually with students.
 - Promote student engagement and successfully deliver content in online classes of up to 10 students.
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PROJECTS

LIZZENS, 2019 - A song classifier for Spotify liked songs.

- Implemented a K-means clustering solution using Python and SKLearn to classify similar songs into playlists, based on data provided by the Spotify API, allowing a user to group songs based on energy, rhythm, cheerfulness...

BREAKITUP, 2017 - A minimalistic [iOS pomodoro method implementation](#).

- Designed and developed a multipage iOS Swift app to manage homework and improve studying techniques.