Nick Wenzel

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Education

University of Melbourne, B-SCI in Biomedical Engineering Systems — Feb 2022 – Nov 2024

- WAM: 70.0
- Melbourne National Merit Scholarship, Awarded 2022; Graduate Degree Package (Master of Biomedical Engineering), Awarded 2022; Ormond College Students' Club Award, Awarded 2023
- Resident at Ormond College, 2022 – 2023

Sydney Grammar School — Graduation Nov 2021

- ATAR: 99.00
- Rowing 2017-2021 (Full Colours with Honour Badge), First VIII; Australian Rowing Championships 2021; Army Cadets 2017-2021, Warrant Officer Class 1; Regimental Sergeant Major 2021; School Orchestra

Experience

Undergraduate Engineer, 23Strands – Parkville, VIC — Jul 2024 – Present

- Developed a Linux-based computational pipeline for long-read Oxford Nanopore sample analytics, integrating quality control systems and a pharmacogenomic prediction model
- Developed patient data obfuscation techniques in a software-based non-SAMD product, utilising a multi-container .NET system
- Participated in discussions with industry partners surrounding Whole Genome Sequencing applications including clinical trial processes, SAMD ventures and eConsent portal development

Systems Engineer, Melbourne Space Program (Sensing Team) – Parkville, VIC — Aug 2024 – Present

- Developed a precision liquid measurement node for a humanoid bartending robot, leveraging ROS2 for closed-loop real-time pouring accuracy measurement
- Incorporated text detection methods via Tesseract OCR for real-time bottle recognition

Head of Events, Ormond College – Parkville, VIC — Nov 2022 – Nov 2023

- Recruited and onboarded a team of 6 students across specific roles to facilitate the delivery of on and off-campus events for 500+ patrons
- Solely responsible for security, insurance, licensing and safety, with a distinct focus on RSA compliance and accreditation across the student body

Projects

BeanieFlex, Grip assistance device for individuals affected by cerebral palsy — YouTube

- Team-based capstone project: wearable medical device prototype assisting flexion of finger muscles controlled solely through head movement
- Utilised CAD manufacturing and signal processing techniques to integrate servo and accelerometer into a wearable format, prioritising ergonomics, UX and patient safety
- Tools Used: LabVIEW, myRIO, Fusion360

Kaizen, Real-time AI form coach for weightlifting — GitHub

- In early development: an iOS app leveraging MoveNet body keypoint tracking for real-time squat analysis, feedback and progress tracking
- Tools Used: Tensorflow, Python, Swift, XCode

Technologies & Interests

Languages: Javascript, TypeScript, Python, Rust, C

Technologies: .NET, Azure, Vue, Tensorflow, MATLAB, LabVIEW, Fusion360

Interests: DJing, music production, event management, futsal, rugby