

# HARRY BIRD

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## EDUCATION

<b>University of New South Wales</b> Master of Data Science,	Sydney, Australia Jan 2024 – Oct 2025
<b>University of Canterbury</b> Bachelor of Engineering (Honours), Mechanical Engineering, Minor in Aerospace Engineering	Christchurch, New Zealand Feb 2020 – Nov 2023

## EXPERIENCE

<b>Full Stack Web Developer (Part Time)</b> Gabion1	Nov 2023 – Present Wellington, NZ
<ul style="list-style-type: none"><li>Led digital transformation initiative migrating legacy MS Access database to cloud-native web application using Supabase BaaS platform with PostgreSQL, implementing RESTful APIs and real-time data synchronization</li><li>Engineered responsive eCommerce platform utilizing Nuxt.js with real-time inventory management, enhancing user experience and conversion optimization</li><li>Designed business intelligence dashboards using JavaScript packages and complex SQL queries to provide actionable insights on KPIs, sales analytics, and revenue forecasting</li></ul>	

  

<b>Building Services Engineering Intern</b> Aurecon	Nov 2022 – Feb 2023 Christchurch, NZ
<ul style="list-style-type: none"><li>Collaborated with multidisciplinary teams delivering sustainable HVAC solutions for commercial building projects, conducting energy audits and optimization analysis for high-performance building systems</li><li>Performed thermal modeling and CFD simulations to calculate heat load analysis and optimize HVAC system design for energy efficiency</li></ul>	

## PROJECTS

<b>Central America Rail Network Feasibility Study   Transportation Engineering &amp; Data Analytics</b>	
<ul style="list-style-type: none"><li>Conducted comprehensive feasibility analysis for passenger and freight rail infrastructure development, performing stakeholder analysis, risk assessment, and market evaluation</li><li>Applied quantitative methodologies including financial modeling, Monte Carlo simulations, and sensitivity analysis to evaluate project viability and ROI projections</li></ul>	

<b>IoT Weather Monitoring &amp; Data Acquisition System   Full-Stack Development</b>	
<ul style="list-style-type: none"><li>Engineered end-to-end IoT solution using Arduino microcontroller and embedded systems programming for real-time environmental data collection</li><li>Deployed self-hosted solution on Linux server using Docker containerization with data visualization dashboard</li></ul>	

## TECHNICAL SKILLS

<b>Programming:</b> Python, JavaScript, TypeScript, SQL (PostgreSQL), R, MATLAB, Shell Scripting
<b>Web Development:</b> Nuxt.js, Vue.js, SvelteKit, Node.js, RESTful APIs
<b>Data Science &amp; ML:</b> Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Statistical Analysis, Predictive Modeling, Feature Engineering, Data Visualization (Matplotlib, Plotly), Jupyter Notebooks
<b>Database &amp; Backend:</b> PostgreSQL, Supabase, Database Design, Query Optimization, Prisma, Data Warehousing
<b>DevOps &amp; Cloud:</b> Docker, Git/GitHub, CI/CD Pipelines, Linux Administration, Cloud Deployment (Vercel, Netlify)
<b>Business Tools:</b> Odoo ERP, Power BI, Tableau, Google Analytics
<b>Engineering Software:</b> FreeCAD, SolidWorks, CFD (ANSYS), FEA, BIM
<b>Languages:</b> English (Native), Spanish (B2)