

Kevin He

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EDUCATION

University of New South Wales
BA in Computer Science

Sydney, NSW
Feb. 2023 – Dec. 2026

Normanhurst Boys High School
Higher School Certificate

Sydney, NSW
Feb. 2017 – Nov. 2022

TECHNOLOGIES

Languages: Python, Java, JavaScript/Typescript, C++, SQL (Postgres)

Frameworks and Libraries: React, Next.js, Node.js, PyTorch, TailwindCSS, Astro, MongoDB

Developer Tools: Git, Docker, Linux, NeoVim, Markdown, Figma, V0 Vercel, Copilot

PROJECTS

Deep NN Chess Engine | *PyTorch, Tensorboard, Google Colab* | [Github](#) **2025**

- Designed a **neural network-based chess engine** using self-play and MCTS inspired by AlphaZero.
- Accelerated training by leveraging **multiprocessing, batched inference, mixed precision and layer pruning** to save training time by **1700%** versus a naive single-CPU loop.
- Streamlined a self-play data generation pipeline, alongside supervised learning in Python to bootstrap engine performance to **≈ 2000 ELO** within **only 10 hours**.
- Achieved a competitive ELO on custom test suites against Stockfish-level tactics while training **cost was free**.

TasteBuds | *Next.js, React, Socket.io, Node.js, TailWindCSS, Git* | [Live Site](#) **2025**

- Developed a gamified cuisine recommendation application with **real-time multi-user interaction via Socket.io**.
- Leveraged popular component libraries including Shadcn/UI to design a **modern front-end** interface.
- Optimised developer workflows and productivity using GitHub to deploy a working product within **3 days**.
- Collaborated with a 4-person development team to qualify **2nd place overall** at *2025 DevSoc Hackabyte Hackathon*.

COVID19 Classifier | *PyTorch, Python3, Ray, Tensorboard, SKLearn* | [Github](#) **2025**

- Self taught** Machine Learning in PyTorch to develop a ResNet model trained on **33,920 CXR** images to identify COVID-19, Lung Opacity and Viral Pneumonia.
- Integrated RayTune and TensorBoard to visualise and self optimize hyperparameters, filtering outlier models.
- Yielded **92.93%** classification accuracy on CIFAR-10, **matching top performing models** of the same class.

EXPERIENCE

Full-Stack Developer | [Site](#) | [GitLab](#)

Google AI in Action Global Event

Sydney, NSW
May. 2025 – Jul. 2025

- Spearheaded a 4-person design team to launch a B2B SaaS prototype using **React, Node.js, and MongoDB**.
- Implemented industry-standard security with **Clerk, Google API** integrations, and serverless CI/CD pipelines using **GitLab CI** to **Google Cloud Run** and **Firebase**.
- Managed end-to-end project planning, integration testing, build standardization, and deployment of containerized services on Google Cloud using **Docker**.

Private Tutor

Apr. 2023 – Present

- Provided one-on-one tutoring in Mathematics and Physics for **HSC-level students**.
- Tailored lessons to suit varying learning styles and behaviours to realize academic goals with a **90% success rate**.
- Created custom practice materials and simplified complex concepts to effectively teach **Extension 1 Mathematics** to average-level students.

EXTRACURRICULAR

- Participated in the **Titanic – Machine Learning from Disaster** Kaggle competition.
- Participated in DevSoc Hackabyte Hackathon, achieved 2nd place.
- Built custom PCs, highly experienced in hardware assembly and troubleshooting.
- Earned an **AMEB Certificate of Performance for Piano** following **Piano Comprehensive Solo Grade 8**.