Kevin He

EDUCATION

University of New South Wales

BE in Computer Science

Normanhurst Boys High School

Sydney, NSW

Feb. 2023 – Oct. 2026 Sydney, NSW

Feb. 2017 - Nov. 2022

TECHNOLOGIES

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

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

Developer Tools: Git, Colab/Jupyter, Docker, Linux, WSL2, VS Code, Gradle, Jira, Figma

PROJECTS

TasteBuds | Next.js, React, Socket.io, Node.js, TailWindCSS, Git | Live Site

2025

- o Developed a gamified cuisine recommendation app with real-time multi-user interaction via Socket.io
- o Deployed in 3 days during 2025 DevSoc Hackabyte Hackathon
- o Lead a 4-person dev team to qualify 2nd place overall

COVID19 Classifier | PyTorch, Python3, Ray, Tensorboard, SKLearn | Github

2025

- Self taught Machine Learning concepts from the ground up to modern Residual Neural Networks in PyTorch over the course of 7 days
- Developed a custom modular ResNet model trained on 33,920 eye images to identify COVID-19, Lung Opacity and Viral Pneumonia using a 56 layer Residual CNN
- o Integrated RayTune and TensorBoard to visualise both accuracy and loss and self optimize hyperparameters
- \circ Yielded only 7.07% error using identical model architecture trained on CIFAR-10, matching top 3 performance against models from the original paper

AlphaZero-Style Chess Engine | PyTorch, Python3, Ray, Tensorboard, SKLearn | Github

2025

- Developed a custom chess engine leveraging Monte Carlo Tree Search (MCTS) guided by a deep Policy/Value Network, inspired by DeepMind's AlphaZero.
- Built a custom PyTorch neural network architecture to evaluate positions and suggest move probabilities, trained on millions of self-play games.
- Achieved a competitive ELO relative to traditional engines on custom test suites, and visualized learning progression via custom training dashboard.

EXPERIENCE

Private Tutor

Apr 2023 - Present

- $\circ\,$ Provided one-on-one tutoring in Mathematics and Physics for HSC-level students
- Tailored lessons to suit individual learning styles and academic goals
- Created custom practice materials and explained complex concepts in simple terms
- Maintained consistent communication with students and parents to track progress

Dental Assistant — Casual *Mastery Dental*

Hornsby, NSW Mar 2023 - Sep 2023

Extracurricular

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