

NELKIT CHAVEZ

AI & ML Engineer | MSc Data Science & Innovation @ UTS | Full-Stack Product Builder

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SUMMARY

I started as a web and mobile developer because I wanted to build things people actually use. Seven years of shipping iOS apps and full-stack products taught me to think in systems, move fast without breaking things, and care about the user on the other end. When AI stopped being a research topic and started showing up in real products, I wanted to be on the side that builds them. That is why I am completing a Master of Data Science and Innovation at UTS, applying ML, Natural Language Processing (NLP), Computer Vision, and Large Language Models (LLMs) to real problems. I still write code the way a product engineer would: with the end user in mind. The difference now is the toolbox: ML, LLMs, and the ability to build in days what used to take months.

SKILLS

AI / ML: PyTorch, scikit-learn, TensorFlow, transfer learning, fine-tuning, BLEU

NLP / LLMs: Hugging Face Transformers, LangChain, DeBERTa, NLTK, sentiment analysis, BERT, RAG, MCP, CrewAI

MLOps & APIs: FastAPI, Docker, Render, Streamlit, REST APIs, GitHub Actions, MLflow

Full-Stack: Python, Django, ReactJS, NextJS, Astro, JavaScript, TypeScript, SQL, PostgreSQL, MongoDB

Mobile: Swift, SwiftUI, Flutter, React Native, UIKit, MVC/MVVM

Cloud: AWS (S3, EC2, RDS), Firebase, Azure DevOps

Data: Pandas, NumPy, Plotly, Matplotlib, Jupyter

SELECTED AI/ML PROJECTS | MSC DATA SCIENCE & INNOVATION, UTS

Sydney Liveability AI | [Applied NLP](#) | [GitHub](#)

- Led architecture and development of a multi-agent LLM (Large Language Model) web application analysing Sydney liveability by suburb, combining Reddit sentiment analysis using DeBERTa and GoEmotions, OpenStreetMap, ABS, and TfNSW transport data into a unified assistant.
- Designed the FastAPI backend, Synthesiser agent, and Streamlit dashboard; managed GitHub branching and pull request workflows for a team of five. Won the Best AI LLM Project Award in the subject-wide competition.
- Stack: Python, FastAPI, Streamlit, DeBERTa, LangChain, CrewAI, ChromaDB, PostgreSQL, RAG, OpenStreetMap, Reddit API, ABS data

Crypto Price Prediction Dashboard | [Advanced ML Applications](#) | [GitHub](#)

- Built an end-to-end Machine Learning (ML) data product predicting next-day high prices for four cryptocurrencies. Individually responsible for the Ethereum prediction model, plus the data pipeline and news/summary feed powered by the CoinGecko API. Predictions served via FastAPI and displayed in a Streamlit dashboard.
- Stack: Python, scikit-learn, FastAPI, Streamlit, Kraken API, CoinGecko API

Food101 Transfer Learning | [Deep Learning](#) | [GitHub](#)

- Comparative study of Convolutional Neural Network (CNN) transfer learning strategies on 101-class food image classification: head replacement, frozen backbone training, and layer-by-layer fine-tuning across GoogLeNet, MobileNetV3, and ResNet50.
- Stack: Python, PyTorch, GoogLeNet, MobileNetV3, ResNet50

Sydney Rain Prediction API | [Advanced ML Applications](#) | [GitHub](#)

- Trained a binary classifier for rain prediction in 7 days and a regression model for cumulative precipitation in 3 days using Open-Meteo historical data for Sydney, deployed as a containerised REST API on Render with Docker.
- Stack: Python, scikit-learn, FastAPI, Docker, Render, Open-Meteo API

Full project walkthroughs, live demos, and source code at nelkit.dev/projects

PROFESSIONAL EXPERIENCE

Freelance Consultant | [Web & GIS Developer](#) | Oct 2022 – Present

- Built tailored web applications and Geographic Information Systems (GIS) solutions for clients, integrating spatial data APIs and interactive map interfaces using OpenLayers and Mapbox.
- Delivered full-stack projects end-to-end: Django backend, ReactJS frontend, PostgreSQL database, deployed on AWS.

Senior Mobile Engineer | [Fleet Street Development / Sumadi](#) | Oct 2021 – Sep 2022

- Led mobile development of Sumadi's first Flutter application, delivering the company's debut product in the mobile market with a cross-platform architecture designed for scale.
- Collaborated with product and design teams to define MVVM architecture from day one.

Senior iOS Developer | [Latin American Armored Rentals / RYTE](#) | May 2019 – Oct 2021

- Redesigned the entire iOS application in Swift, achieving a 90% reduction in client-reported bugs and a 40% improvement in application performance.
- Introduced XCTest automated testing and Crashlytics crash monitoring, establishing a quality baseline that significantly reduced production incidents.

Mobile Developer | [Sunray Management Group / Locstatt](#) | Apr 2017 – May 2019

- Led end-to-end development of the Classroom Locstatt mobile application in Swift 5, from UI design in Sketch to App Store release, used by employees across 20+ enterprise clients for safety training.

Junior Mobile & Web Developer | [Aplicaciones Moviles y Digitales Amaya / Crayon Star](#) | Jan 2016 – Mar 2017

- Contributed to 12+ web and mobile projects using Ionic, Django, and AngularJS, reducing delivery timelines by up to 50% through hybrid development approaches.

EDUCATION

Master of Data Science and Innovation | University of Technology Sydney (UTS) | Feb 2025 – Dec 2026

Computer Science Engineer | Universidad Politecnica de Ingenieria | 2011 – 2015

Honours: Summa Cum Laude

LANGUAGES

Spanish (Native) | English