

Neal Kapadia

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EDUCATION

University of Texas at Dallas

Bachelor of Science in Computer Engineering, Minor in Biology
Academic Excellence Scholarship – Full-ride recipient

Richardson, TX
August 2023 – May 2027
GPA: 3.840

SKILLS

Languages: Python, C/C++, Java, SQL, JavaScript
Frameworks: React.js, Django, Flutter, Flask, Tailwind CSS
Developer Tools: Git, GitHub, Jira, VS Code
Libraries: PyTorch, Pandas, NumPy, Scikit-learn, Matplotlib

EXPERIENCE

Research Assistant | Python, Gen AI, Machine Learning

Laisuo Research Group – The University of Texas at Dallas
Department of Computer Science Award (SPUR Symposium, 2025)

May 2025 – Present
Richardson, TX

- Engineered a closed-loop, generative-predictive AI pipeline to autonomously design and optimize novel additives for high-efficiency aqueous zinc-ion batteries
- Trained and tuned an XGBoost predictive model on a dataset of 575 compounds, achieving a cross-validated R^2 of 0.82 for evaluating molecular performance
- Integrated a model for molecule generation (MoLeR) that iteratively proposed and refined 500+ novel molecular structures per cycle, identifying a top candidate molecule with a predicted columbic efficiency of 97.65%

Software Engineering Intern | Anthropic AI API, ETL, Python

Priro Systems Inc.

May 2024 – August 2024
Plano, TX

- Developed a critical end-to-end ETL (Extract, Transform, Load) data pipeline for the company's core product, reducing processing time by 90% through innovative use of Python and Anthropic AI with asynchronous processing.
- Utilized a diverse tech stack, including Python, React, Django, PostgreSQL, Anthropic AI, and prepared for deployment on Amazon S3.
- Managed project workflow using Jira and version control with Bitbucket, developing task and time management skills in a startup environment.

PROJECTS

GenEngine <https://devpost.com/software/genengine> | React, TypeScript, Google Gemini, Node.js

September 2025

Winner - Best AI Application Built with Cloudflare, HackRice 15

- Designed and built a three-panel educational tool that uses an AI to turn natural language prompts into playable HTML5 Canvas games
- Engineered the core user experience in React and TypeScript, managing the data flow from a user's prompt to the Google Gemini API and back to the UI
- Integrated the Monaco Editor to create a live-editing environment, solving challenges in parsing and rendering the AI-generated code to the canvas in real-time

Shinobi Self <https://devpost.com/software/shinobi-self> | Flutter, OpenAI API, Figma, Mobile Development

June 2025

Winner- 1st Place – NRVe Sponsored Challenge, HackAI 2025

- Led the UI/UX design from concept in Figma to full implementation in Flutter, creating a Naruto-themed, gamified user experience
- Integrated the OpenAI API to dynamically generate personalized daily missions tailored to the user's chosen character path
- Engineered the core gamification loop, including the XP system, ninja rank progression, and a mood-tracking feature to encourage user engagement

DeepSkin <https://devpost.com/software/deepskin> | Python, PyTorch, Flask, Google Maps API

March 2025

- Architected the backend using Flask, selecting and fine-tuning a pre-trained ResNet50 model on a Kaggle dataset to serve as the core computer vision engine
- Orchestrated multiple API calls, using the OpenAI API to generate descriptions for detected conditions and the Google Maps API to recommend nearby dermatologists
- Implemented data augmentation techniques and tuned hyperparameters to improve the final classification accuracy of the model

Personal Website <https://nealkapadia.netlify.app/> | HTML, CSS

September 2024 – Present

- Built a personal portfolio website to showcase work experience and a comprehensive list of projects