

JASMIT KAKKAR

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EDUCATION

National University PhD - Computer Science - <i>In Progress...</i>	San Diego, CA 6/2025 – <i>Present</i>
Santa Clara University MS - Computer Science, AI & Machine Learning <i>GPA: 3.8 - Magna cum Laude</i>	Santa Clara, CA 6/2021 – 6/2024
Relevant Courses -Machine Learning, Big Data, Deep Learning	
University of California: Merced BS Computer Science <i>GPA: 3.8</i>	Merced, CA 6/2013 - 6/2017

EXPERIENCE

Self Employed <i>AI Platform Engineer</i>	Saratoga, CA June 2024 - Present
Working on AI powered music generation platform. Contributed to the evolution of the codebase through new feature implementation and performance optimization. Passionate about generative AI and real-world applications of deep learning in creative domains.	
Ruby Three <i>Back End Developer</i>	Dublin, CA April 2019 - March 2021
Back-end developer engaged in the entire application lifecycle. Database Management, integration of third-party API's, unit testing.	
Auto-Chlor <i>Network Engineer</i>	Mountain View, CA March 2018 - March 2019
Automation scripting using Python and Powershell for various routine tasks. Identifying issues and problem solving remotely by coordination and communication.	

SKILLS

AI Tools:	Pytorch, ImageNet, NumPy/Pandas, RL, Hugging Face, ComfyUI, automatic1111
Programming:	Python, C++, Powershell, scalable API, automation scripts
Test Tools:	Rspec, Capybara, CircleCI, Selenium
Other:	Git, Linux, Docker, OAuth2, PostgreSQL

PROJECTS

News Sentiment Analysis for Trading (NSAT) *Python, NLP, Pytorch*

Currently working on an AI tool designed to extract and analyze relevant data from various news outlets, with a specific focus on sentiment analysis related to companies and stocks. This solution aims to provide traders and investors with valuable insights into market sentiment using AI models.

Neural Network from Scratch *Python*

Created from scratch a feed-forward neural network that was trained using a dataset of peptide chains and their associated label as antibiofilm or not antibiofilm. I broke up this problem into data preparation, feature extraction, data normalization/regularization, hidden layer modifications, and weight / learning rate / iteration tweaking. Through much trial and error from testing I was able to find a setup that would result in a 98%+ accuracy when run using our validation dataset and a MSE score of 0.92 after finetuning.

Classification of Cars in Traffic Dataset *Tensorflow, Keras, Pandas, SKLearn, YOLOv5, CNN*

Utilized transfer learning to retrain a convolutional neural network which is adept at object detection. My dataset consists of traffic images where I identified and classified different types of cars. The first task is selecting an optimal model for this task. I ended up selecting the YOLOv5 model, a well known and widely used model The model was trained on the dataset of 15000 images. Once a retrained model was achieved, I was able to run it on the test dataset for roughly 50 epochs to produce labels of its own, labels which define bounding boxes for objects, their classification and confidence rating of that prediction from the model. This model reached a MaP score of .8697