

Japinder Singh Narula

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EDUCATION

University of California, Berkeley

Bachelor of Science in Electrical Engineering and Computer Sciences

2021 - 2025

Berkeley, CA

Coursework:

Computer Vision	Data Structures	Robotic Manipulation	Computer Architecture
Computational Photography	Object-Oriented Programming	Robotic Interaction	Machine Structures
Artificial Intelligence	Algorithms	Nanorobotics	Circuit Design
Machine Learning			

TECHNICAL SKILLS

Languages

Python; Java; Kotlin; C++; C;
Go; JavaScript; TypeScript;
Rust; SQL

Frameworks / Libraries

Spring Boot; FastAPI;
PyTorch; scikit-learn; Keras;
OpenCV; Node.js; React;
Next.js; Remix; Tailwind CSS

Tools / Platforms

Gradle; Docker; Git; ROS;
CAD; Apps Script

Databases & Systems

MongoDB; PostgreSQL;
RISC-V Architecture

EXPERIENCE

Data Scientist

Calctra

October 2025 - Present

Oakland, CA

- Built automated data workflows and visual analyses of large industry datasets to guide strategic and business development initiatives

Software Engineer

LegalZoom

May 2024 - August 2024

Mountain View, CA

- Architected and deployed containerized Spring Boot REST API services on cloud infrastructure, improving data accuracy and backend scalability while reducing customer support calls by over 15%
- Enhanced database schemas and designed resilient data flows across PostgreSQL services handling thousands of transactions daily
- Collaborated with cross-functional teams to integrate backend services into production-grade UI workflows, improving reliability and observability of distributed components

Software Engineer

Pienomial

June 2022 - August 2022

Remote

- Developed Merkle tree data structures in Go and Rust with MongoDB integration, enhancing backend security and integrity verification for distributed systems, while also automating workflows with secure scripts that reduced manual maintenance effort by 30%

Data Structures Course Staff

University of California, Berkeley

January 2023 - May 2023

Berkeley, CA

- Supported 50+ students in mastering core data structures and algorithms, providing 1:1 guidance and debugging assistance that improved lab completion rates by 25%

PROJECTS

Machine Learning: Nearest Neighbours for Geo-Location | *Python, PyTorch*

- Implemented k-NN regression using CLIP embeddings in PyTorch to predict image geolocations, achieving the lowest Mean Displacement Error (MDE) with optimal k value
- Optimized model accuracy using grid-search, and visualized PCA results to analyze spatial trends in the dataset

LSTM Classical Music Generator | *Python, TensorFlow, Keras, music21, NumPy*

- Implemented LSTM-based sequence model to generate classical-style MIDI compositions, trained on preprocessed symbolic music data
- Engineered a full data pipeline for MIDI parsing, tokenization, sequence windowing, model training, and MIDI synthesis using *music21* and TensorFlow/Keras

Encrypted File Sharing System | *Golang*

- Designed a distributed secure file-sharing system using RSA encryption in Go for authentication and data exchange
- Authored a detailed design document outlining struct definitions and function workflows to ensure functional and security compliance

UCPD Community Service Organization Program Scheduler | *Python*

- Built an automated scheduling program that handled data collection and shift assignments while accounting for job-specific constraints
- Implemented matching algorithm that improved scheduling accuracy and streamlined workforce management

CERTIFICATIONS

DeepLearning.AI TensorFlow Developer

Coursera

- Trained and deployed a TensorFlow/Keras CNN achieving 90%+ accuracy on Fashion-MNIST with 60,000+ training images, applying transfer learning with pretrained models and efficient tf.data pipelines
- Trained LSTM-based models for text generation and time-series forecasting, demonstrating applied expertise in RNN architectures and deep learning optimization