Japinder Singh Narula

japinder.narula@berkeley.edu | (510)-960-9643 | japindernarula.com | LinkedIn | GitHub

Education

University of California, Berkeley 2021 - 2025
B.S. Electrical Engineering and Computer Sciences *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

Frameworks / Libraries
Spring Boot; FastAPI; PyTorch; scikit-learn; Keras; OpenCV; music21; React; Next.js; Remix; Tailwind CSS

Tools / Platforms
Gradle; Docker; Apps Script; ROS; CAD

Databases & Systems
MongoDB; PostgreSQL; SQL; RISC-V

Experience

Software Engineer May 2024 - August 2024
LegalZoom *Mountain View, CA*
- Architected and deployed Spring Boot REST API endpoints, improving data accuracy and backend efficiency, and reducing customer support calls by over 15%
- Collaborated with cross-functional teams to integrate APIs into customer-facing UI, refining database schemas and enhancing data reliability across thousands of transactions daily

Software Engineer June 2022 - Aug. 2022
Pienomial *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 January 2023 - May 2023
University of California, Berkeley *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%

Community Service Officer November 2022 - June 2024
University of California Police Department *Berkeley, CA*
- Engineered shift automation system in Apps Script, reducing scheduling time by 30%; improving efficiency for 80+ department staff

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 secure file-sharing system using RSA encryption for user authentication, file sharing, and file storage
- Created a comprehensive design document with struct definitions and detailed steps for function execution to meet functionality and security requirements

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