

Japinder Singh Narula

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EDUCATION

University of California, Berkeley	2021 - 2025
<i>Bachelor of Science in Electrical Engineering and Computer Sciences</i>	<i>Berkeley, CA</i>
Coursework:	
Computer Vision	Data Structures
Computational Photography	Object-Oriented Programming
Artificial Intelligence	Algorithms
Machine Learning	Robotic Manipulation
	Robotic Interaction
	Nanorobotics
	Computer Architecture
	Machine Structures
	Circuit Design

TECHNICAL SKILLS

Languages	Frameworks / Libraries	Tools / Platforms	Databases & Systems
Python; Java; Kotlin; C++; C; Go; JavaScript; TypeScript; Rust; SQL	Spring Boot; FastAPI; PyTorch; scikit-learn; Keras; OpenCV; Node.js; React; Next.js; Remix; Tailwind CSS	Gradle; Docker; Git; ROS; CAD; Apps Script	MongoDB; PostgreSQL; RISC-V Architecture

EXPERIENCE

Data Scientist <i>Calestra</i> <ul style="list-style-type: none">Built automated data workflows and visual analyses of large industry datasets to guide strategic and business development initiatives	October 2025 - Present <i>Oakland, CA</i>
Software Engineer <i>LegalZoom</i> <ul style="list-style-type: none">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 dailyCollaborated with cross-functional teams to integrate backend services into production-grade UI workflows, improving reliability and observability of distributed components	May 2024 - August 2024 <i>Mountain View, CA</i>
Software Engineer <i>Pienomial</i> <ul style="list-style-type: none">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%	June 2022 - August 2022 <i>Remote</i>
Data Structures Course Staff <i>University of California, Berkeley</i> <ul style="list-style-type: none">Supported 50+ students in mastering core data structures and algorithms, providing 1:1 guidance and debugging assistance that improved lab completion rates by 25%	January 2023 - May 2023 <i>Berkeley, CA</i>

PROJECTS

Machine Learning: Nearest Neighbours for Geo-Location <i>Python, PyTorch</i> <ul style="list-style-type: none">Implemented k-NN regression using CLIP embeddings in PyTorch to predict image geolocations, achieving the lowest Mean Displacement Error (MDE) with optimal k valueOptimized model accuracy using grid-search, and visualized PCA results to analyze spatial trends in the dataset	
LSTM Classical Music Generator <i>Python, TensorFlow, Keras, music21, NumPy</i> <ul style="list-style-type: none">Implemented LSTM-based sequence model to generate classical-style MIDI compositions, trained on preprocessed symbolic music dataEngineered a full data pipeline for MIDI parsing, tokenization, sequence windowing, model training, and MIDI synthesis using <code>music21</code> and <code>TensorFlow/Keras</code>	
Encrypted File Sharing System <i>Golang</i> <ul style="list-style-type: none">Designed a distributed secure file-sharing system using RSA encryption in Go for authentication and data exchangeAuthored a detailed design document outlining struct definitions and function workflows to ensure functional and security compliance	
UCPD Community Service Organization Program Scheduler <i>Python</i> <ul style="list-style-type: none">Built an automated scheduling program that handled data collection and shift assignments while accounting for job-specific constraintsImplemented matching algorithm that improved scheduling accuracy and streamlined workforce management	

CERTIFICATIONS

DeepLearning.AI TensorFlow Developer <i>Coursera</i> <ul style="list-style-type: none">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 <code>tf.data</code> pipelinesTrained LSTM-based models for text generation and time-series forecasting, demonstrating applied expertise in RNN architectures and deep learning optimization	
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