RITIK SINGH

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Current Masters of Computer Science student at the University of California Irvine with strong foundations in fullstack software engineering through classwork and past work experiences.

EDUCATION

University of California, Irvine — Irvine, CA
Master of Computer Science — *Current – Dec 2026*

Purdue University — West Lafayette, IN
Bachelor of Science in Computer Science — *Aug 2020 – Dec 2023*

TECHNICAL SKILLS

Languages: Python, C/C++, Java, HTML/CSS, R, TypeScript, JavaScript, C#, MatLab
Frameworks and Tools: HTML, CSS, Bootstrap, React, Node.js, .NET, Tableau, Node.js, Git, Docker, Kubernetes, Vite
Database Management: SQL, PostgreSQL, NoSQL, MongoDB, Neo4j, Apache Hadoop
ML/AI: pandas, NumPy, Matplotlib, PyTorch, SciKit Learn, TensorFlow, Keras

EXPERIENCE

Software Engineer Intern — May 2023 – Aug 2023
Edwards Lifesciences — *Irvine, CA*

- Designed a distributed medical data pipeline using AWS Lambda and Step Functions to automatically ingest Veeva Systems data into S3 to reduce operational overhead
- Developed modular ETL workflows in AWS Step Functions integrating Apache Spark and AWS Glue for automated data transformation and analysis at scale
- Enabled event-driven processing by wiring Amazon EventBridge to trigger ETL jobs in real time upon data arrival
- Delivered an interactive Tableau dashboard powered by AWS Athena queries over S3 datasets to provide real time, self-serve analytics for business analytics and executive needs

Software Engineer Intern — June 2022 – Aug 2022
Clear Edge Lending — *Aliso Viejo, CA*

- Created Tableau dashboards for lead tracking the sales funnel from initial inquiry to loan application and funding
- Created a machine learning model to assess the loan risk of clients based on factors such as loan-to-value ratio
- Standardized the loan closing process to increase pipeline velocity and improve the closing ratio by 5%
- Built a Python automation script using Pandas and NumPy to extract and process application data from documents, generating loan closing estimates and reducing client closing lead times by 11%

PROJECTS

Color Perception Puzzle Game | *https://color-game-zeta-sooty.vercel.app/* — July 2025 – Current

- Designed and implemented a full-stack web game with progressive difficulty, featuring a real-time color-detection challenge where players identify subtly different tiles under strike limits
- Developed a secure backend using Node.js, Express, and Postgresql with HTTP-only cookie authentication via OAuth 2.0, enabling both guest and logged-in play with persistent stats
- Optimized development with Vite and added admin/debug endpoints for stats tracking and gameplay tuning
- Deployed backend service and database on Railway which communicates to the frontend hosted on Vercel

CCI Machine Learning Model | *Python, Pandas, Numpy, Keras, TensorFlow* — Dec 2022 – Dec 2023

- Built an NLP model on economic news headlines using TensorFlow Keras to predict Consumer Confidence Index
- Performed data preprocessing with pandas/NumPy including tokenization and padding for effective model input
- Designed and optimized an LSTM-based model with dropout and dense layers for continuous value regression
- Developed training and evaluation workflows with batching and metric tracking to enhance model accuracy to 90%

Loan Funding Predictor | *Python, Pandas, Numpy, Tableau* — June 2022 – Aug 2022

- Created a fully automated report in Python using years of past data to predict monthly loan volume and incoming revenue within 1% of true volume for 6 months to date (accurate in real time based on the loan pipeline status)
- Eliminated 100+ hours of manual loan funding predictions per month previously done by operations teams
- Created and maintained personalized Tableau dashboards containing model results for C-level executives