

Sandeep Salwan

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EDUCATION

Northeastern University

Boston, MA

B.S. Computer Science, Concentration: Artificial Intelligence

Dec 2025

- **Relevant Coursework:** Java Object-Oriented Design, Java II, Physics 1, AI, Data Science, Discrete Structures, Calculus 3, Systems, Databases, Algorithms, C++ Programming II, Math Reasoning, Cybersecurity, Linear Algebra

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Kotlin, HTML/CSS, TypeScript, Go, SQL, COBOL, JavaScript

Tools and Technologies : React, Flask, FastAPI, JUnit, PyTorch, Spring Boot, Git, Docker, Kubernetes, AWS (EC2, S3, Lambda), Azure, Streamlit, LLM, Jupyter, Bash, Jenkins, MariaDB, Pandas, Jira, PyTorch, Scikit-learn, Kali Linux

EXPERIENCE

Software Engineer Intern: *Experian*

Jun 2024 – Oct 2024

- Developed data-processing scripts in Spring Boot to merge complex reports and securely encrypt/decrypt data using EBCDIC to ASCII and refactored Python modules to Java to improve compatibility, efficiency, and security.
- Converted mainframe COBOL code to AWS, resolving transition bugs and prepared binary and ASCII data from AWS S3 buckets using ETL processes for processing to enhance system performance and data accessibility.
- Conducted QA testing for 2 data processing app releases to ensure precision and accuracy, using Jenkins & JUnit for CI/CD automation and collaborating with teams to refine requirements, accelerating project delivery by 15%.

Backend Engineer Intern: *CreditCliq*

Jul 2023 – Sep 2023

- Designed, deployed, and maintained back-end processes using Docker for containerization and JVM tuning to improve memory allocation, resulting in smoother application performance and efficient resource utilization.
- Appointed as the Team Leader for eight college students and delegated tasks to interns for group assignments.
- Redesigned payment processing service by optimized SQL queries & Redis caching, greatly enhancing database indexing and query efficiency to cut transaction time by 30% and improve overall system stability and reliability.

Software Developer Intern: *CrowdFundYourFees*

Jul 2022 – Sep 2022

- Worked closely with leading senior engineers to enhance the front-end using React, improving load times by 20%.
- Designed and proposed alternate software design patterns to optimize existing code structures utilizing Figma.
- Scripted and executed code within production development & built the main landing page for rapid user input.

PROJECTS

AnimalCare 🐾 *Sam2, OpenCV, Jupyter, React, REST API*

Aug 2024

- Created an OpenCV interface with REST API for real-time video uploads, analyzing submitted videos on frame changes to improve cost efficiency and accuracy, enabling detection of animal ailments and precise diagnostics.
- Designed one-shot object detection pipeline with Meta's Sam2 and Jupyter, improving detection accuracy by 18%.

PhishKill 🐼 *Scikit-learn, Heroku, HTML/CSS, Flask*

May 2024

- Implemented end-to-end phishing detection app with Scikit-learn on Heroku to analyze emails & calculate risk.
- Integrated detection algorithms with external APIs, designing an intuitive HTML/CSS interface for real-time, email-based risk scoring to enhance user security and streamline phishing threat assessments.

HouseFinder AI 🏠 *Python, React, Rentcast API, WhatsApp API, Websockets*

Nov 2023

- Engineered real estate application with RentcastAPI to categorize properties by safety, walkability, and amenities.
- Enhanced accessibility by integrating WhatsApp API & Websockets to enable real-time, cross-platform messaging, allowing users to communicate seamlessly across devices and remain actively engaged with property listings.

CERTIFICATIONS & HONORS

AWS Certified Cloud Practitioner | Java Development Framework (Pluralsight) | Machine Learning (Andrew Ng) – **T2** - Merritt College Hackathon | **T15** - AI Agents Hackathon | Chess (FIDE A-Class) | **T5** - Hack the Hub (Ireland)