

# SUJAL BOLIA

## PROFESSIONAL SUMMARY

Recent computer science graduate proficient in machine learning and software development. Demonstrated ability to build end-to-end solutions, from data preprocessing to model deployment. Experienced in Python, Rust, and TypeScript. Seeking a challenging role to apply technical skills and contribute to innovative projects.

## EDUCATION

**University of British Columbia, Vancouver, BC**

Bachelor of Science (Computer Science) | 2024

## WORK EXPERIENCE

**Machine Learning Engineer | IIT Bombay**

**July 2024—Present**

- Developed a forest image analysis pipeline with data curation, preprocessing, and model development
- Trained and optimized MobileNet and YOLOv8 models, tuning hyperparameters for optimal performance
- Deployed a high-performance API for real-time image processing and inference

**Software Engineer Intern | Microsoft**

**May—August 2022**

- Developed a Discord bot using Rust to streamline hosting and gameplay of text-based Werewolf games
- Implemented markdown-to-html conversion for PDF creation using wkhtmltopdf
- Integrated Fandom API for efficient wiki article lookups and searches

**Software Engineer Intern | Microsoft**

**May—August 2021**

- Developed a command-line tool to extract images from various compression formats
- Employed header analysis to automatically select the decompression algorithm (LZMA, LZHAM, ZSTD)
- Created low-level Rust bindings for the LZHAM decompression format to enhance compatibility
- Optimized code through parallelization and memory management, achieving a 10x speedup

## PROJECTS

**insightUBC (Course Project)**

**Apr 2023**

- Developed a TypeScript API server to provide access to historical university section and room data
- Implemented a custom EBNF-based query language for flexible data retrieval and filtering
- Constructed a robust test suite to ensure API reliability and accuracy
- Built a Discord bot frontend to enable user-friendly interaction and visualization of course data

**peerAdvice (hackathon)**

**Jan 2023**

- Developed a peer-to-peer mentoring platform to connect students across different year levels
- Integrated Firebase authentication and Calendly for seamless user experience and scheduling
- Collaborated with a team of 4 to successfully deliver the project under a 24 hr deadline at nwHacks 2023

**serenity-utils**

**Aug 2020—Jul 2022**

- Developed an asynchronous Rust library to enhance the serenity-rs Discord API
- Implemented pagination menus and timeout-based input watchers for interactive user experiences
- Provided custom model parsing for efficient data handling and streamlined development

## SKILLS

Rust, TypeScript, Python, Java, C, C++, Go, Flask, Django, React, NodeJS, Express.js, TensorFlow, ML, Optimization, SQL, NoSQL, AWS, Docker, Kubernetes, GDB, JUnit, Testing, API, Kafka, Spark