

# DIVY PATEL

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## EDUCATION

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### University of British Columbia

Sep. 2021 – Present

*Bachelor of Applied Science in Computer Engineering*

*Vancouver, BC*

- Coursework: Software Construction, Machine Learning, Distributed Systems
- Trek Excellence Scholarship 2022, 2023 – Top 5% in Engineering

## EXPERIENCE

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### Amazon Web Services

May 2024 – Aug 2024

*Software Engineer Intern*

*Vancouver, BC*

- Working on the AWS Payments team to create customer-centric payment products that enable seamless business transactions

### Plom, UBC Mathematics Department

May 2023 – Aug 2023

*Software Engineer Intern*

*Vancouver, BC*

- Developed a REST API using Django and PostgreSQL to manage upwards of 3000 students' data simultaneously
- Implemented auto-grading algorithms using unsupervised learning methods such as PCA and clustering to reduce grading time by 20%
- Explored algorithmic and machine learning approaches to matching students to hand-written IDs
- Utilized Pandas and Python scripting to analyze exam grade data and auto-generate graphical reports

### UBC Thunderbots

Sep 2021 – Apr 2023

*Software Team Member*

*Vancouver, BC*

- Developed autonomous soccer playing robots in C++ and Python to compete annually at an international stage
- Redesigned simulator UI using PyQt6 to enable multi-layered plots while boosting visualization speeds by 200%
- Streamlined inter-process communication using Google protocol buffers to increase simulation speed by 70%
- Implemented ball-passing AI algorithms with redirection and jump shots to place 3rd internationally

### University of British Columbia

Sep 2022 – Dec 2022

*Computer Science Teaching Assistant*

*Vancouver, BC*

- Led classrooms of 30+ students to explain algorithms, object-oriented design, and data acquisition in C and C++
- Assessed learning outcomes of 1000+ students through exams grading while providing feedback for improvement

## PROJECTS

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### BThere | [Devpost](#) | [GitHub](#)

*Python, Flask, Firebase, Postman, Google Cloud, OpenAI*

- Placed 3rd out of 700+ people at nwHacks 2024 by developing a web app that helps improve friendships through real-time conversation suggestions
- Implemented backend API in Python using Flask by collaborating closely with frontend developers to seamlessly integrate full-stack components through specification-driven API development
- Integrated Google Cloud and OpenAI APIs to parse live video and generate suggestions with only 8 second latency
- Incorporated Firebase's NoSQL cloud database to store user data, videos, and images with over 99% uptime

### 3FA: Facial and Gesture Lock | [GitHub](#) | [Demo](#)

*Python, PyTorch, Pandas, NumPy, OpenCV*

- Developed a one-shot Siamese machine learning model to recognize faces without training on client data
- Implemented a deep CNN in PyTorch with over 40 million parameters and trained it with the cross-validation method
- Collected, labelled, and cleaned data of over 6000 images using OpenCV and Pandas

### Hari: The Chess Engine | [GitHub](#)

*Java, JUnit, Gradle, GitHub Actions, Git*

- Utilized object-oriented programming concepts such as abstraction to implement a full-form chess AI in Java

## TECHNICAL SKILLS

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**Languages:** Python, Java, C/C++, JavaScript, SQL, Bash, HTML/CSS, Verilog, ARM Assembly

**Libraries & Frameworks:** PyTorch, Pandas, NumPy, Django, Flask, Firebase, JUnit, Matplotlib, React

**Developer Tools:** Git, Docker, Postman, GitHub Actions, Linux, Shell, Jira

**Interests:** Chess (11 years, 1700 Elo), Driving/Road trips (80k+ kilometers), 8-ball Pool