

# Dhvani Patel

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## EXPERIENCE

### LUMAFIELD | Software Engineering Intern

Jan 2022 - Apr 2022 | Cambridge, MA

- Developed a novel, efficient **distance to surface algorithm** using **SciPy** and **scikit-image** for pores inside of a 3D volume
- Increased the robustness of the **background detection algorithm** using **dask-image** and **Numpy**
- Investigated bottlenecks in **Dask distributed schedulers** leading to a **45%** speed improvement

### IBM | Software Engineering Intern

May 2021 - Aug 2021 | Ottawa, ON

- Developed and containerized a **Kubernetes** operator in **Golang** for the pipeline of a **SIEM on cloud** that collects log events/flows from network assets and detects threats to identify incidents
- Used **RedHat OpenShift** and wrote scripts to package, deploy and manage cloud applications leading to improved development infrastructure
- Led an investigation into a **Kafka** integration issue and worked with multiple teams to identify the root cause and test multiple solutions

### NUCLEAR PROMISE X | Innovation Catalyst Software Intern

Sep 2020 - Dec 2020 | Kincardine, ON

- Trained a model using **Azure OCR** and **Python** to convert engineering specification documents into a database
- Led an **emerging technology research** group, triaging technologies including **OpenAI GTP-3**, and **Spot the Robot** for nuclear applications

### CIENA | Software Engineering Intern

Jan 2020 - Apr 2020 | Ottawa, ON

- Led the creation of a responsive, **data-driven React web dashboard** for monitoring and configuring Ciena's transport products
- Design and development prime for a real time **embedded C microservice** that facilitated communication between microservices using **IPv6 NDP**

### POLAR INC. | Full Stack Developer

May 2019 - Aug 2019 | Toronto, ON

- Improved load time of orders on **Django** and **React** dashboard by 4x
- Added support using **regex** for truncated unique hashes in **REST API requests** to improve reliability of Polar's content API

### UNIVERSITY OF ALBERTA | Research Assistant in Software Engineering Lab

Jul 2017 - Aug 2017 | Edmonton, AB

- Spearheaded a unique approach of using language models to detect and correct syntax errors using **Keras**; co-authored and published in **IEEE** (<https://ieeexplore.ieee.org/document/8330219/>)

## PROJECTS

### L3ARN HIGH SCHOOL STUDY TOOL - ANDROID APP

- Collected feedback from customers and iterated development which led to **50 000+** downloads and **182 reviews** on Google Play Store

## SKILLS

### LANGUAGES

Golang • JavaScript • C++ • C  
• Python • Java • SQL

### TECHNOLOGIES

Kubernetes • Docker • Dask  
Kafka • Bash • Make • TensorFlow  
RedHat OpenShift • Azure • Numpy  
Redis • OpenCV • PostgreSQL  
Node.js • React • Django

### TOOLS

Agile (Scrum) development • Jira  
Confluence • MS Project • Figma  
Power BI • Jenkins • Notion  
Asana • Trello • MS SSMS

## RELEVANT COURSES

- Algorithms
- Operating Systems
- User Interfaces
- Software Design and Architectures
- Statistics for Software Engineering

## EDUCATION

### UNIVERSITY OF WATERLOO

Bachelor of Software Engineering

2018 - 2023

Inter Pipeline Discovery Award  
Scholarship

## VOLUNTEERING

### YOUTHCOMPUTING

### NON-PROFIT

### ORGANIZATION

Co-Founder & Co-President

Oct 2016 - Present

Fort McMurray, AB

**Coordinate and scale** team to accomplish tasks aligned with the vision and ensure that **social impact** has positive consequences

### MAPPING CLUB

Co-Founder & Co-Director

Sep 2020 - Present

Waterloo, ON

**Coordinate** team to create concept maps of various **problem spaces**