

# Dhrumil Patel

[dhrumilp15@gmail.com](mailto:dhrumilp15@gmail.com) | [dhrumilp15.github.io](https://github.com/dhrumilp15) | [in/dhrumilp15](https://in.dhrumilp15) | 647-303-3486

## EXPERIENCE

---

- Snowflake** Sept - Dec 2023  
*Software Engineer Intern* San Mateo, US
- Built clustering functions for Snowflake SQL to cluster **500k rows x 1k features in < 10 mins** with metrics
  - Developed an algorithm to find the number of clusters in large datasets in **linearithmic** time
- Roblox** May - Aug 2023  
*Software Engineer Intern* San Mateo, US
- Built QA's **first** observability tools (an API and Slack bot) to calculate release metrics and report anomalies. Used by **3 QA teams** and the **Engine Release team**
- Vector Institute** Sept - Dec 2022  
*Applied Machine Learning Research Intern* Toronto, CA
- Used domain adaptation to improve privacy-preserving federated learning **CNNs'** performance by **3.2%**
- A Thinking Ape** May - Aug 2022  
*Software Engineer Intern* Vancouver, CA
- Implemented **2-step authentication** using **Django, Objective C** and **Java** to eliminate **10k+** bots per day
- Flinks** Jun 2021 - May 2022  
*Machine Learning Intern* Montreal, CA
- Built & deployed a **BERT**-driven entity recognition system in **PyTorch** to interpret **100M+** transactions per day
  - Improved the existing entity recognition system's performance (F-score) by **56%**
  - Trained entity recognition models with up to **30%** fewer training examples with similar performance using **Adversarial Validation, Active Learning** and **Knowledge Distillation**

## PROJECTS & ORGANIZATIONS

---

- Haystackfs** May 2021 - Present
- A verified Discord bot for fast and secure file search used by **42k+ users** in **550+ servers** to manage **1M+ files**
- Unsupervised Monocular Depth Estimation** 2023
- Extends Godard, Aodha, Brostow's 2016 work with a CNN for semantic segmentation
- Watolink** Oct 2019 - Dec 2022
- Led a team of 10 to build an **EEG signal processing API** for a **mind-controlled communication system**
  - Built a **3D trajectory predictor** with **OpenCV** and **scikit-learn** for a mind-controlled quidditch drone
- Google Code-In: CCExtractor** Oct 2019 - Feb 2020
- Built a **Python Github App** that has reported **1500+** unsupported songs for **CCExtractor** and **SwagLyrics**

## AWARDS & ACCOMPLISHMENTS

---

- 1st at the International NeurotechX Competition** 2022
- HackMIT thatGameCompany Challenge 2nd Place, HackMIT MIT-IBM Challenge Winner** 2022, 2020
- Top 17% Globally, Google Codejam Qualifying Round** 2022
- Top 3% Globally, 7th in Canada at Google Hashcode Qualifying Round** 2022
- Top 7.5% Globally in Facebook HackerCup** 2021
- Hack The North Manulife Challenge Winner; Various prizes at 40+ hackathons** 2017 - Present

## EDUCATION

---

**University of Waterloo, Candidate for Bachelor of Computer Science, Honours**

*President's Scholarship of Distinction, Faculty GPA: 3.9*

## TECHNICAL SKILLS

---

**Languages:** Python, C++, SQL, Java, Objective C, Golang, JavaScript

**Tech:** BigQuery, Google Cloud Platform, Docker, Elasticsearch, Kubernetes, Spark, DigitalOcean, Azure, PostgreSQL

**Libraries:** PyTorch, Huggingface, OpenCV, scikit-learn, SciPy, Tensorflow, Keras, NumPy, Pandas, Matplotlib