

# Dhrumil Patel

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## EXPERIENCE

<b>Ramp</b> <i>Software Engineer Intern</i> <ul style="list-style-type: none"><li>Built the international bill payment integration for 2 accounting platforms, deployed to <b>2600+</b> businesses</li><li>Migrated accounting validation functions to run in bulk, improving their <b>p95 execution time</b> by <b>4-5x</b></li></ul>	May - Aug 2024 New York City, US
<b>Snowflake</b> <i>Software Engineer Intern</i> <ul style="list-style-type: none"><li>Built clustering functions for Snowflake SQL to cluster <b>500k rows x 1k features</b> in <b>&lt; 10 mins</b> with metrics</li><li>Developed a novel algorithm to find the number of clusters in large datasets in <b>linearithmic</b> time</li></ul>	Sept - Dec 2023 San Mateo, US
<b>Roblox</b> <i>Software Engineer Intern</i> <ul style="list-style-type: none"><li>Built QA's <b>first</b> observability tools to calculate release metrics and report anomalies. Used by <b>4 teams</b></li></ul>	May - Aug 2023 San Mateo, US
<b>Vector Institute</b> <i>Applied Machine Learning Research Intern</i> <ul style="list-style-type: none"><li>Used domain adaptation to improve privacy-preserving federated learning <b>CNNs'</b> performance by <b>3.2%</b></li></ul>	Sept - Dec 2022 Toronto, CA
<b>A Thinking Ape</b> <i>Software Engineer Intern</i> <ul style="list-style-type: none"><li>Implemented <b>2-step authentication</b> using <b>Django</b>, <b>Objective C</b> and <b>Java</b> to eliminate <b>10k+</b> bots per day</li></ul>	May - Aug 2022 Vancouver, CA
<b>Flinks</b> <i>Machine Learning Intern</i> <ul style="list-style-type: none"><li>Built &amp; deployed a <b>BERT</b>-driven entity recognition system in <b>PyTorch</b> to interpret <b>100M+</b> transactions per day</li><li>Improved the existing entity recognition system's performance (F-score) by <b>56%</b></li><li>Trained entity recognition models with up to <b>30%</b> fewer training examples with similar performance using <b>Adversarial Validation</b>, <b>Active Learning</b> and <b>Knowledge Distillation</b></li></ul>	Jun 2021 - May 2022 Montreal, CA

## PROJECTS & ORGANIZATIONS

<b>Haystackfs</b> <ul style="list-style-type: none"><li>A verified Discord bot for fast and secure file search used by <b>42k+ users</b> in <b>650+ servers</b> to manage <b>1M+ files</b></li></ul>	May 2021 - Present
<b>Unsupervised Monocular Depth Estimation</b> <ul style="list-style-type: none"><li>Extends Godard, Aodha, Brostow's 2016 work with a CNN for semantic segmentation</li></ul>	2023
<b>Watolink</b> <ul style="list-style-type: none"><li>Led a team of 10 to build an <b>EEG signal processing API</b> for a <b>mind-controlled communication system</b></li></ul>	Oct 2019 - Dec 2022
<b>Google Code-In: CCExtractor</b> <ul style="list-style-type: none"><li>Built a <b>Python Github App</b> that has reported <b>1500+</b> unsupported songs for <b>CCExtractor</b> and <b>SwagLyrics</b></li></ul>	Oct 2019 - Feb 2020

## AWARDS & ACCOMPLISHMENTS

<b>1st at the International NeurotechX Competition</b>	2022
<b>HackMIT thatGameCompany Challenge 2nd Place, HackMIT MIT-IBM Challenge Winner</b>	2022, 2020
<b>Top 3% Globally, 7th in Canada at Google Hashcode Qualifying Round</b>	2022
<b>Top 7.5% Globally in Facebook HackerCup</b>	2021
<b>Hack The North Manulife Challenge Winner; Various prizes at 40+ hackathons</b>	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  
**Tech:** BigQuery, Google Cloud Platform, Docker, ElasticSearch, Spark, DigitalOcean, PostgreSQL  
**Libraries:** PyTorch, Huggingface, OpenCV, scikit-learn, SciPy, Tensorflow, Keras, NumPy, Pandas, Matplotlib