

Carlos Planelles

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Education

University of Toronto, BAsc in Engineering Science (ML Option) Sept 2020 – Current

- Cumulative GPA: 3.58/4.00
- Year 3 GPA: 3.84/4.00
- **Coursework:** Computer Algorithms, Artificial Intelligence, Probability and Statistics, Engineering Design

Experience

Associate Data Engineer, Flipp – Toronto, ON May 2023 – Aug 2024

- Developed, tested, and deployed ETL pipelines, data processing libraries, and quality checks based on stakeholder needs and engineering best practices
- Implemented the majority of the data development work for Flipp's largest 2024 initiative
- Independently created a new ETL from scratch, including library code and quality checks

Senior Guide, Toronto Adventures – Toronto, ON May 2020 – Oct 2021

- Promoted to Senior Student Ambassador in 2021
- Worked with a team of 5-6 other Junior and Senior Guides to efficiently and safely guide hundreds of customers per day to explore the Humber River by canoe, kayak, and paddleboards

Projects

StreetViewNet: Geolocation Estimator from StreetView Images github.com/gerlesh/streetviewnet

- Worked with two classmates to develop an image classification model to identify global source region from a Google StreetView image
- Explored the use of a K-Means clustering algorithm to create the image classes
- Scraped Google Maps to identify locations with valid StreetView images to sample from
- Learned a great deal from the failures of this project, including the importance of taking care to avoid biases
- Tools Used: Python, Google Cloud, PyTorch

A Video as a Trajectory in CLIP Embedding Space: Learning with Continuous Next-Token Prediction github.com/jonah-chen/clip-next-token-pred

- Worked with two classmates to develop a multimodal transformer model for zero-shot video-label retrieval
- Achieved 56.6% and 60.2% top-1 video-caption and caption-video retrieval accuracies respectively
- Tools Used: Python, PyTorch, PapersWithCode

A Modular and Expandable Discord Bot github.com/gerlesh/discordbot
github.com/gerlesh/ibpowerbot

- Developed a discord bot to help with organization and communication for my high school class of 65 people to teach myself to code in Python
- Rewrote and updated this bot to be modular and expandable, to serve a larger 100 person streaming community
- Learned about Python, SQL databases, working with APIs, and Asynchronous programming
- Tools Used: Python, SQL, Discord API

Skills

Languages: Python, C, Scala, SQL, LaTeX, MATLAB, Bash

Software: Linux, Git, Databricks

Interpersonal: Strong team player and independent worker, excellent attention to detail