

# Piyush Datta

**Website:** <https://www.piyushdatta.com>

**GitHub:** <https://github.com/PiyushDatta>

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## Work Experience

### Amazon Web Services

*Software Development Engineer II*

Toronto, ON

April 2022 – Present

*Software Development Engineer I*

June 2020 – April 2022

- Backend development work with AWS Aurora Database Engine team using C/C++
- Filed a patent as lead engineer in a solution using a RL based AI model to predict optimal database configs
- Working on a horizontally scalable sharding solution for Aurora, focused on creating a distributed storage engine that can handle distributed transactions and queries using protocols, consensus, and IPC mechanisms
- Part of core Aurora MySQL team that worked on recent major version, Aurora MySQL 3 (MySQL 8.0)

### Givex

*Software Developer*

Toronto, ON

February 2019 – January 2020

- Backend development work with Python, JavaScript, C/C++, PostgreSQL, and Unix
- Implemented gift card, point of sale and other transaction-based solutions for companies such as Nike, McDonalds, Marriott International, and many more
- Integrated Apple wallet and Google pay, with web services for both, into our gift card systems
- Developed SOAP APIs for integration with third party vendors, such as CAA

## Projects

### TensorFlow – Google Brain Open-source Project

<https://www.tensorflow.org/>

*C/C++, Python*

- Contributor for open-source project to help developers create and train machine learning models

### Two Sigma - Artificial Intelligence (AI) Competition - Halite 2

<https://halite.io>

*Python, TensorFlow, NumPy*

- Used an artificial neural network to train and teach my bot to beat other bots in a virtual game created by Two Sigma (Ranked top 10% of players in Halite 2)

### Cashmi - Android Application

<https://play.google.com/store/apps/details?id=com.application.cashmi>

*Android, Java, Firebase, Facebook SDK*

- Provides users with an easy way to split bills/transactions with other users

### Other projects

<https://github.com/PiyushDatta>

- Desktop Image Tagger, SEC Edgar File Downloader, Monte Carlo Pi Approximation Simulation
- For more, please visit my GitHub page as it is not feasible to list them all here

## Skills

**Technologies/Concepts:** C/C++, Rust, Python, Java, JavaScript/Typescript, Distributed transactions, IPC, 2PC protocol, Neural Networks (AI), Reinforcement learning, Consensus algos, NewSQL & DistributedSQL

## Education

University of Toronto, St. George Campus

Toronto, ON 2014 – 2018