Greater Vancouver Area
BC, Canada

Gautham Pughazhendhi

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Education

Master of Data Science, University of British Columbia, **Grade**: 96% — Sep 2021 — Jun 2022
Bachelor of Engineering (Computer Science and Engineering), Anna University, **CGPA**: 8.44/10 — Jun 2014 — Apr 2018

Experience

- **Machine Learning Engineer, Electronic Arts (EA Games), Canada** — Aug 2022 — Present
  - Designing and building a **feature store** for our **recommendations team** to support a model that flags the game rooms creating bad experiences for other players in the **Battlefield 2042** game title with a **p99 read latency** of less than **15ms**.
  - Contributing to the development of services for an in-house, flexible **AI Platform** to **experiment, train, tune**, and **serve ML models** of popular game titles such as **FIFA, NFS, Madden, Apex Legends**, etc. Mitigated the **cost increase** by up to **23%** for training and **400%** for serving models, and reduced the serving **p99 latency** from **210 ms** to **10 ms** when compared to AWS SageMaker.
  - Working on a **patent proposal** involving **LLMs** and **intent-entity recognition models** for our games with the **AI Labs** team.
- **Machine Learning Engineer, Trusting Pixels Inc., Canada (MDS Capstone Project,** unpaid co-op) — May 2022 — Jun 2022
  - Worked on building a **image classification** model using **PyTorch** to authenticate **thousands of photos** per day by detecting and locating different types of **retouching** in edited images with about **90% accuracy** and **recall**. Contributed to the **design and development** of the **machine learning pipeline** using AWS services such as **AWS SageMaker**.
- **Teaching Assistant, The University of British Columbia, Canada** — May 2022 — June 2022
  - Teaching assistant for the course **DSCI 100 (Introduction to Data Science)**, responsible for educating the undergraduate students on the use of data science tools to summarize, visualize, and analyze data as part of the teaching team.
- **Machine Learning Engineer, Sirius Computer Solutions, LLC, a CDW company, India** — Jun 2018 — Jul 2021
  - **Reduced the total budgeted manpower cost by 20%** for a US banking firm by building an **NLP-based contextual chatbot** with smart KB **article recommendations** to automate the firm's issue-creation for internal requests in Salesforce and ServiceNow. Fine-tuned the **intent classification and dialogue models** and contributed to the **design and architecture** of the **NLP pipeline**.
  - **Minimized the support team turnaround time by 20%** for a US global payments company by developing a **text classification model using LSTM**, a recurrent neural network (RNN), and **eliminating the manual categorization** of emails.
  - **Cut down the allocated workforce cost by 70%** by building multiple **conversational AI assistants** to automate the mission-critical IT operations of a US retail MNC; automated the CI/CD pipeline of bots using **Azure DevOps** and **Kubernetes Service**.

Major Academic Projects

- **Forest Fire Area Prediction (Graduate):** Trained and tuned a **Support Vector Regression**(SVR) model to predict **forest fire areas** using weather and soil data; improved the model by removing outliers using the Cook's distance method. — 2021
- **Earthosys (Undergraduate Capstone):** Developed an **ensemble model** using Random Forests to predict **tsunamis**. **Implemented an efficient search algorithm** on the **NASA** dataset to find the nearest coastal distance with coordinates from the **NOAA**'s tsunami dataset. Developed a **web application**'s backend, a **chatbot**, and an **IoT-based alert device** using **Raspberry Pi**. Published as part of Proceedings of ICCIDE 2018. — 2017 — 2018

Technical Skills

Languages: Python, Java, R, C++, SQL. **Frameworks:** Tensorflow, PyTorch, Hadoop, RASA. **Databases:** Redis, Cassandra, MySQL.
Workflows: AirFlow, KubeFlow, MLFlow **Libraries:** Scikit-Learn, Pandas, NumPy, Spacy, Keras, PySpark, Matplotlib, SQLAlchemy.
Tools: Jupyter, PyCharm, VS Code, RStudio, git, Docker, Sourcetree, Lens (Kubernetes). **Cloud Platforms:** Azure, AWS, GCP.

Hackathons

- **WiDS 2022 Datathon, Stanford University**: Ranked **1**st in Vancouver and **16**th overall in the 5th Annual WiDS Kaggle Datathon. Built an ML model to predict the energy efficiency of buildings to help policymakers target plans that maximize emission reductions.
- **HCL Commerce hackathon 2020**: Won the **Most Creative** award with my team for implementing a smart voice assistant to shop on an e-commerce site and integrating it with **Google Assistant**.
- **FLEX 2.0, Codes and Gears 2020, a 36-hour Hackathon, Sirius Computer Solutions (Winners):** Built a **computer vision**-based prototype to convert sign language into words on-screen to help differently-abled with speech and hearing loss. **Demo**
- **FLEX, Codes and Gears 2019 (Winners):** Developed a **computer vision**-based prototype to detect bad postures, control smart home devices, and convert gestures into action words by estimating body poses to help people with disabilities. **Demo**

Awards

Feather in the cap 2019; ACE performer of the year 2018 (Sirius Computer Solutions)
First place at **IEEE CS Project Expo 2016; Third** place at **IEEE CS Coding Contest 2016** (Velammal Engineering College)