Gautham Pughazhendhi

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Portfolio | LinkedIn | GitHub | Kaggle

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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

- **Software Engineer - AI Platform, Electronic Arts (EA Games), Canada**   Aug 2022 — Present
  - Designed and built features such as **batch materialization engine, multi-tenancy support** for a **feature store** service as part of the **AI Platform** to serve features for real-time inference and training dataset creation. Eliminated the need for duplicate ETL pipelines and data storage, reducing the **development and operational cost** by **50%**.
  - Worked on several features such as **custom environment service, integration of RStudio server** which helped data scientists from **FIFA, Madden, and NFS** game titles to prototype and train models using the **in-house ML platform** and avoid a **cost increase** by up to **23%** for training with AWS SageMaker.

- **Machine Learning Engineer, Trusting Pixels Inc., Canada (Master's Co-op,** unpaid**)**   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 using their RAW versions with over **85% 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.

- **Software Engineer - Machine Learning, 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. Built a **data pipeline** to clean, transform, and derive additional features; articulated and presented the **data insights** to the onsite team.
  - **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 1st in Vancouver on the 5th Annual WiDS Kaggle Datathon for building 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 e-commerce voice 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

Recipient of **Spot stock bonus 2023** award (ELECTRONIC ARTS).
Feather in the cap 2019; ACE performer of the year 2018 (SIRIUS COMPUTER SOLUTIONS).