Gautham Pughazhendhi

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Education

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

Experience

- **Software Engineer, Sirius Computer Solutions Inc., India (HQ: San Antonio)** — Jun 2018 — Jul 2021
  - Built a **NLP-based contextual chatbot** with smart recommendations for a banking firm to automate the firm's issue creation for internal requests in Salesforce and ServiceNow and **reduced the total budgeted manpower cost**.
  - Developed an email classification **deep learning model using LSTM**, a recurrent neural network(RNN) for a global payments company to **minimize the support team turnaround time** by eliminating the manual categorization of emails.
  - Implemented a ticket **classification model using a TensorFlow neural network** for a healthcare company to **group tickets and bring down the workload** of support agents.
  - **Cut down the allocated workforce cost by 70%** by building multiple **conversational AI assistants** to automate the mission-critical IT operations of a retail MNC; automated the CI/CD pipeline of bots using Azure DevOps and Kubernetes Service.
  - **Led an initiative** with senior AI consultants in enabling my colleagues to work on customer AI projects; **taught basic concepts in machine learning** and helped in designing the enablement plan.
  - Developed a **page speed evaluation product** using React.js to evaluate the performance of web pages by customizing **Google's Lighthouse CI** project; **reduced the page load times by at least 30%** of the existing e-commerce customers.
  - Built features for OneSource, a **testing automation framework** to enable cloud testing for web and mobile platforms which **reduced the procurement cost of test devices by 50%** by leveraging cloud-based solutions.
- **Software Engineer Intern, Sirius Computer Solutions Inc.** — Jan 2018 — Mar 2018
  - Developed web pages, controllers, and a security module to authenticate and authorize the users of the company for a **security and inventory management application**; **decreased the company's expenditure** on external applications.
- **Research Assistant, Velammal Engineering College** — Jan 2017 — Apr 2017
  - Worked on the design and development of a classroom response system as part of the **TIFAC-CORE research group** funded by **Cognizant Technology Solutions**; **improved the evaluation model** on students' understanding of concepts in my college.

Major Academic Projects

- **Forest Fire Area Prediction (Graduate):** Built a **regression model** using Support Vector Regression(SVR) to predict **forest fire areas** using meteorological and soil moisture data; **minimized mean absolute error(MAE) to 8.68 ha** with a limited dataset. 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**. 2017 — 2018
- **Classroom Response System (Undergraduate):** Created a **client module** for a Raspberry Pi based touch-enabled device using PyQt4 and **improved client-server communication** by replacing HTTP with **Constrained Application Protocol (CoAP)**. 2017

Technical Skills

Languages: Python, R, SQL, JavaScript, Java, CSS, HTML, Swift. **Frameworks:** Tensorflow, RASA, React, Flask, Django, Angular.
Libraries: Scikit-Learn, Pandas, NumPy, Matplotlib, Keras, SQLAlchemy, PyQt4. **Cloud Platforms:** Azure, AWS.
Tools: Jupyter, PyCharm, VS Code, RStudio, git, Docker, Android Studio, Xcode, Qt Designer.

Hackathons

- **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 prototype collaboratively with my team 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 prototype along with my colleagues 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)