Gautham Pughazhendhi

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Portfolio | LinkedIn | GitHub | Kaggle

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EDUCATION

Master of Data Science candidate, UNIVERSITY OF BRITISH COLUMBIA, **Current Grade**: 97%   Sep 2021 — Jun 2022
Bachelor of Engineering (Computer Science and Engineering), ANNA UNIVERSITY, **CGPA**: 8.44/10   Jun 2014 — Apr 2018

EXPERIENCE

- **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 **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. Improved the **security** of bots and monitored the **performance of ML pipelines**.
  - Contributed to the design of **NoSource**, an **AI-based testing automation framework** to perform a website's QA testing without test suites by seamless identification of HTML elements in a page. Enabled cloud testing of web and mobile platforms for **OneSource**, a testing framework, and **reduced the procurement cost of test devices by 50%** by leveraging cloud-based testing simulations.
  - Customized **Google's Lighthouse CI** open-source project to develop a **page speed evaluation product** using React.js and evaluate the performance of web pages; **reduced the page load times by at least 30%** of the existing e-commerce customers. Contributed to the open-source project by reporting a few existing issues to the **Google developer team**.
- **Software Engineer Intern, Sirius Computer Solutions, LLC, A CDW company, India**   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, India**   Jan 2017 — Apr 2017
  - Designed and developed an IoT-based classroom response system as part of the **TIFAC-CORE research lab** funded by **Cognizant Technology Solutions**; **improved the client module** by replacing HTTP with Constrained Application Protocol (**CoAP**).

MAJOR ACADEMIC PROJECTS

- **StrapvizPy and StrapvizR (Graduate):** Created **Python and R packages** named StrapvizPy and StrapvizR to streamline bootstrapping samples, creating insightful plots and tables with statistics such as confidence interval, standard error for reports and papers.   2022
- **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**.   2017 — 2018

TECHNICAL SKILLS

Languages: Python, R, SQL, JavaScript, CSS, HTML, Java. **Frameworks:** Tensorflow, PyTorch, RASA, React, Flask, Django, Angular.
Libraries: Scikit-Learn, Pandas, NumPy, Matplotlib, Altair, Keras, Psycopg2 (PostgresSQL), SQLAlchemy.
Tools: Jupyter, PyCharm, VS Code, RStudio, git, Docker, Sourcetree, Android Studio. **Cloud Platforms:** Azure, AWS.

HACKATHONS

- **WiDS 2022 Datathon, Stanford University**: Ranked 1st in Vancouver and 16th 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)