

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

- Machine Learning Consultant, Trusting Pixels Inc., Canada (MDS Capstone Project, unpaid co-op)** May 2022 — Jun 2022
 - Building a **computer vision**-based (CNN) model using **PyTorch** to authenticate **thousands of photos** per day by detecting **cloning** (pimple/scar removal), **warping** (body shape enhancements), and **inconsistent noise patterns** in the edited images.
 - Contributing to the **design, development, and deployment** of an **image comparison product** by analyzing a large dataset of over **200 GB** to determine retouching with **segmentation** and validate its compliance with the company's retouching regulations.
- 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 **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**. Created **Python API** for integration with external services.
 - 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.

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. **Frameworks:** Tensorflow, PyTorch, RASA, React, Flask, Django. **Databases:** MySQL, Postgres, Mongo.
Libraries: Scikit-Learn, Pandas, NumPy, Spacy, Gensim, Matplotlib, Altair, Keras, PySpark, 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)