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STEVE JEFFERSON

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EDUCATION

Bristol, United Kingdom **University of Bristol** **Sept 2021 – Sept 2022** (Expected)

- Master of Science (MSc) in Data Science
- Graduate Coursework: Large-Scale Data Engineering; Advanced Data Analytics; Statistical Computing and Empirical Methods; Technology, Innovation, Business, and Society (TIBS)

Coimbatore, India **Karunya Institute of Technology** **July 2017 – May 2021**

- Bachelor of Technology (BTech) in Computer Science and Technology, Graduated with First-Class
- Graduate Coursework: Computer Vision; Artificial Neural Networks; Machine Learning; Deep Learning; Database Systems; Blockchain Technology; Cryptography and Network Security
- Extracurricular Activities: Head of IT, National Entrepreneurship Network (NEN); Student Coordinator, National Service Scheme (NSS)

EMPLOYMENT

Software Engineer, Intern **Samsung** **Mar 2021 – Aug 2021**

OnDevice-AI: *www.samsung.com*

- Improved the generation time for the audio extension module by 60% by implementing a dimensionality reduction algorithm based on keynote analysis.
- Coded advanced deep learning algorithms including Vector-Quantised Autoencoder, LSTM, GAN and Transformers to locate the optimum model for audio data generation.
- Leveraged Knowledge in GitLab, Python, PyTorch, Flask, Cloud Computing, Technical Research

R&D Intern **Reliance JIO** **Dec 2020 – May 2021**

JIO cloud: *www.jiocloud.com*

- Implemented a Big-Data system that utilised serverless computing to monitor live data sources and analyse public opinion towards a specific keyword with sentiment analysis.
- The system was highly efficient when compared with existing systems, due to which a research paper on this project has been submitted to the International Journal of Web Services Research (IJWSR).
- Leveraged Knowledge in Serverless Computing, Web Scraping, DynamoDB, AWS Lambda, System Design

Research Assistant (Remote) **Indian Institute of Technology - Bombay** **Dec 2020 – May 2021**

Under Prof. Ganesh Ramakrishnan: *www.cse.iitb.ac.in/~ganesh*

- Built a system for extracting values from bank passbook data, utilising knowledge graph rule induction and formal concept analysis.
- Implemented a developer portal, to enable developers to dynamically generate API keys with AWS Cognito and track their usage on the portal with AWS CloudWatch.
- Leveraged Knowledge in Git, OpenAPI Spec., Flask, Docker, FCA, Microsoft Azure, API development

Software Engineer, Intern **Triquetra Healthcare** (Start-up) **Jul 2020 - Nov 2020**

TRIAS: *www.triquetra.in*

- Created a X-ray fracture classification AI model that located and classified fractures better than Harvard Radiologists and other models by 10% (Tested on the MURA Dataset). By creating a novel method that involved recursive transfer learning between the model's layers that optimized both accuracy and storage space.
- Incorporated a heatmap to provide a user-friendly interface to identify the location of any abnormalities.
- Leveraged Knowledge in Deep Learning, Data Analysis, Technical Research, Data engineering, Machine Learning

SOFTWARE PROJECTS

- **Personal Website:** *steve-jefferson.com* (for additional information and projects)

- **Research Contributor (DECILE):** *decile.org*
  - Decile is a project that focuses on building artificial intelligence models that utilise low amounts data of with the concept of targeted subset selection
  - I am featured on the DECILE webpage under the team section as one of the contributors for my work in designing the CORDS module which utilizes various data selection strategies and scoring functions to create subsets and summarize key elements of massive datasets.
  - Utilised: TensorFlow, SciPy, Matplotlib, scikit-learn

- **Serverless Cloud OCR:**
  - Developed an optical character recognition (OCR) system that uses serverless computing to allocate computing resources based on demand.
  - Utilised: Microsoft Azure, Django, Zappa, Docker, AWS Lambda, HTML, CSS, JavaScript, jQuery

- **Intruder Detection System:**
  - Designed and implemented a system to detect home intruders using an object detection model and an infrared camera that was activated based on a motion trigger. Blynk was used to send alerts and images when the system detected suspicious activity.
  - Utilised: TensorFlow.js, Node-Red, Zappa, Raspberry Pi, OpenCV, Blynk, Unix Shell

ADDITIONAL EXPERIENCE AND AWARDS

- **Second Prize, Infosys INFYTQ Campus Connect-Coimbatore:** Achieved 2nd rank with grade A+ in a regional coding competition hosted by Infosys at Karpagam College of Engineering.
- **Instructor:** Taught multiple lessons for the modules Computer Vision, Deep Learning and Artificial Neural Networks during my Batchelors at Karunya Institute of Technology
- **Certifications:** Completed 32 certifications from DataCamp along and other certifications from Amazon, IBM, Deeplearning.ai and The University of Michigan in the topics of Artificial Intelligence and Cloud Computing.

SKILLS

- **Software:** Python, Unix, GIT, PowerShell, Docker, Excel, Jekyll, Django, Flask, JavaScript, HTML, CSS