HITHAISHI SURENDRA

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EDUCATION

R.V. College of Engineering, Bengaluru, India — August 2019 – June 2023

Bachelor of Engineering in Electronics and Telecommunication Engineering, **GPA 8.26/10** (First class with Distinction)

Relevant Coursework: Object Oriented Programming, Data Structures and Algorithms, Web Development, Cryptography and Network Security, Computer Networks, Wireless Communication, Internet of Things, Management Information Systems, Advanced Statistical Methods, Engineering Mathematics I & II, Linear Algebra Statistics and Probability Theory, Discrete and Integral Transforms

GRE Overall Score – 321 — September 2023

IELTS Score – 8.0 — October 2023

TECHNICAL SKILLS

- Programming Languages: Java, Python, C++, C, HTML/CSS/JavaScript, SQL
- Databases: MongoDB, MySQL
- Data Storage Systems: NetApp ONTAP 9, Dell EMC Unity, Dell PowerScale
- Tools and Frameworks: Jira, Tableau, VisualStudio Code, Eclipse IDE, Git, TensorFlow, Keras, PyTorch

PROFESSIONAL EXPERIENCE

Telstra, Bengaluru, India — July 2023 – Present

Associate Software Engineer

I. Contributed to the Enterprise Data Storage and Backup Services Chapter within the Telstra Cloud Group and Global Networks and Technology (GN&T) department.

- Developed and optimized storage architecture in alignment with business requirements and IT strategy, enhancing overall efficiency.
- Monitored storage infrastructure, ensuring a 99.4% high availability rate and proactively addressing capacity planning to meet evolving needs, facilitating seamless scalability.
- Successfully executed data migration and storage consolidation strategies, streamlining operations and improving resource utilization.
- Implemented and managed storage networking technologies, such as SAN (Storage Area Network) and NAS (Network Attached Storage), contributing to the establishment of a robust and scalable IT infrastructure that facilitated a 30% improvement in data access and retrieval speeds.

II. Created a comprehensive messaging application, facilitating user communication. The primary goal of the project was to deliver an application with a focus on Message Resiliency and Disaster Recovery.

- Implemented robust server-side logic to efficiently process and store messages, enhancing overall system performance.
- Established and maintained databases, implementing meticulous replication and backup mechanisms that safeguarded data integrity and reliability, achieving a 98.9% data consistency rate.
- Spearheaded the implementation of message queuing systems to optimize message delivery, resulting in improved efficiency and reduced latency.
- Developed comprehensive disaster recovery plans for the backend infrastructure, ensuring 99.5% uptime and seamless operations during unforeseen events.
- Collaborated closely with cross-functional teams to seamlessly integrate front-end and back-end functionalities, resulting in a 22% reduction in system response time and a 25% improvement in overall user satisfaction.

Cisco, Bengaluru, India September 2021 – October 2021

Software Engineering Intern

Served as a Summer Intern at Cisco in partnership with RVCE Centre of Excellence in Internet of Things (IoT) within the Intelligent Systems department. Developed a tailored campus assistive chatbot for the university website using Natural Language Processing (NLP), achieving an accuracy rate of 89% in answering frequently asked questions (FAQs).

- Engaged in direct interactions to comprehend student and faculty requirements, leveraging the feedback.
- Undertook Data Collection and Preprocessing, involving the identification and compilation of pertinent data sources—such as historical chat logs, FAQs, or domain-specific datasets. The data was meticulously preprocessed, cleansed, and appropriately labeled to facilitate the training of deep learning models.
- Led the development of the natural language understanding component, specializing in extracting user intents and entities from input messages. Took charge of training the model to expertly recognize user intents and align them with appropriate responses, resulting in a 14% increase in conversational accuracy.

PUBLICATIONS

- *Lead author:* Hithaishi Surendra, et al. (2023). *Lane Detection and Traffic Sign Detection using Deep Learning and Computer Vision for Autonomous Driving Research Using CARLA Simulator*. International Journal on Recent and Innovation Trends in Computing and Communication, 11(10), 2062–2069. https://doi.org/10.17762/ijritcc.v11i10.8891
- *Co-author, Presenter:* Hithaishi Surendra, et al. (2021). *Deep Learning based Campus Assistive Chatbot.* 2021 IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), Bangalore, India, 2021, pp. 1-4. https://doi.org/10.1109/CSITSS54238.2021.9683551

INDUSTRY-ACADEMIA PROJECTS

- **Lane Detection and Traffic Sign Detection using Deep Learning and Computer Vision for Autonomous Driving Research Using CARLA Simulator** –
  Constructed models employing SegNet and You Only Look Once (YOLO) algorithms for Lane Detection and Traffic Sign Detection. These models were rigorously tested within the virtual environment CARLA, yielding impressive accuracy rates of 93.66% for Lane Detection and 92.58% for Traffic Sign Detection, respectively.
- **Detection and Classification of Lung Cancer using Convolutional Neural Networks** –
  Engineered a machine learning model designed to identify the presence of lung cancer using the LUNA (LUng Nodule Analysis) dataset, comprised of CT scan images. The severity of the disease was assessed through a comprehensive analysis of each nodule within the lung. The model successfully pinpointed the location and size of each detected nodule, providing a diagnosis for enhanced medical insights. Achieving an accuracy rate of 97.51%, the developed model surpassed existing counterparts in efficiency, showcasing its advanced capabilities through comparative analysis.

ACHIEVEMENTS & CAMPUS INVOLVEMENT

- Authored two international papers, with the first one published in a Scopus-indexed open-access peer-reviewed journal. Presented the second paper at the 5th International IEEE CSITSS Conference, a collaborative effort between RVCE and Florida International University.
- Achieved recognition on the Dean's Merit List for outstanding academic performance within the department.
- Volunteered for two impactful projects, "Zero Food Waste" and "Agri Job Opportunities," at the LGS Social Innovation and Research Centre, earning recognition and appreciation from both NSS and Red Cross.
- Developed course materials for an AR-VR (Augmented Reality - Virtual Reality) curriculum for a school during the Covid-19 pandemic. Volunteered as a teacher, instructing students up to grade 5 in nearby villages.
- Engaged as a member of the Rotaract, Frequency and Coding clubs, actively contributing to community service, fostering discussions and collaborating on coding projects. Additionally, participated in NSS activities and attended Entrepreneurship Cell events, gaining valuable insights into social responsibility and entrepreneurial ventures.