Nishanth Solomon

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SUMMARY

Graduate student and versatile programmer with 2+ years of research in Natural Language Processing, Deep Learning, and work experience in end-to-end Development, Deployment, and Monitoring of Software as a Service(SaaS) and seeking a full-time position as a robotics software developer starting immediately in July 2021.

EDUCATION

Master of Science in Robotics and Autonomous Systems August 2019 - May 2021
Arizona State University, Tempe, Arizona 4.0/4.0

Bachelor of Engineering in Mechanical July 2013 - May 2017
Anna University, Chennai, India 8.11/10.0

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, Matlab, C/C++, Bash
Databases, and OS: PostgreSQL, MySQL, Linux/Ubuntu, Windows
Libraries: AllenNLP, PyTorch, TensorFlow, Keras, NLTK, spaCy, Scikit-Learn, Numpy, Pandas, FastAPI
Tools, and Frameworks: ROS, Gazebo, Git (GitHub, GitLab), Cherrypy, Flask, Elasticsearch, Docker, Selenium

PROFESSIONAL EXPERIENCE

Software Developer ***Zoho Corporation, Chennai, India*** May 2017 - July 2019

Natural Language Processing: Research and implementation of Neural Networks

- Developed NLP models for Named Entity Recognition, Language Detection, Sentiment Analysis, Clustering.
- Analyzed Elasticsearch queries and improved the search quality by introducing the shingle analyzer.
- Organized client meetings and defined functional and technical requirements.

DevOps: Responsible for software development life cycle, scaling REST APIs, and maintaining servers in 4+ data centers.

- Delivered NLP models as micro-services and maintained a network of 50+ Linux servers with 99.9% up-time.
- Configured PostgreSQL, designed table models, formulated access APIs, and implemented full-text search.
- Managed GitLab repositories and permissions and created a chatbot with webhooks to keep the team updated.

PROJECTS

Automated Vehicle Platoon ***Arizona State University*** October 2020 – November 2020

- Executed pretraining and testing of Reinforcement Learning model on the racetrack map dataset.
- Accomplished socket connection for leader-follower communication in CARLA simulator.
- Deployed multiple vehicles in the same CARLA environment to implement platooning.
- Evaluated the working of the multi-robot system in different scenarios using multiple parameters.

AI12 Reasoning Challenge ***Arizona State University*** February 2020 - April 2020

- Initiated Information Retrieval and Prediction modules with Elasticsearch and language models.
- Implemented code to support GPU inferencing and reduced the prediction time by 1/10th.
- Reviewed the failed cases and implemented new methods to increase the accuracy by 15%.
- Trained the XLNet Model on the RACE dataset using Google Colab and experimented with new models.

Automated ground vehicle ***Arizona State University*** September 2019 – November 2019

- Experimented with ultrasonic sensors and diagnosed problems in different types of connections.
- Programmed the sensors to work parallelly to avoid latency and measure accurate distances.
- Fabricated mechanical mount for the sensors to add ground clearance for precise working.
- Tested the working of the lane change assist and parking assist using the installed sensors.

WORK EXPERIENCE

Intern ***NeXHS Renewables*** October 2020 - February 2021

- Designed a self-climbing construction crane with robotic arms to construct a space tower.
- Retrofitted a knuckle boom crane on top of the crane to give multiple functionalities and hence reduced cost.
- Created a working model in CAD using SOLIDWORKS, and demonstrated the operation of the crane.

Research Aide ***Arizona State University, Tempe, Arizona*** September 2019 – December 2019

- Installed sensors on unmanned ground vehicles to equip them with Advanced Driver Assistance Systems.
- Constructed mechanical components for the integration of ultrasonic sensors and radars.
- Assisted with programming and conducted experiments on the Unmanned Ground Vehicle.