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 and Deployment of Software as a Service(SaaS) and seeking a full-time position as a software developer starting in May 2021.

EDUCATION

- **Master of Science in Robotics and Autonomous Systems** *August 2019 - May 2021*
  Arizona State University, Tempe, USA *3.89/4*

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

PROGRAMMING SKILLS

Databases: PostgreSQL, MySQL
Deep Learning Libraries: AllenNLP, PyTorch, NLTK, spaCy, Scikit-Learn
Programming Languages: Python, Java, JavaScript, Matlab, C, C++
Version Control System: Git (GitHub, GitLab)
Web Frameworks: Cherrypy, Flask

PROFESSIONAL EXPERIENCE

- **Software Developer** *May 2017 - July 2019*
  Zoho Corporation *Chennai, India*
  - **Natural Language Processing**: Built, trained and deployed Neural Networks
    * Built a model on AllenNLP to classify an industry by feeding a TF-IDF of keywords to a three hidden layer neural network. It was able to accurately predict 45 business labels with 91% accuracy.
    * Developed a bi-directional LSTM with Attention Named Entity Recognition system, which located and classified named entity mentions in unstructured text into 108 pre-defined categories with sub-types.
    * Trained a single layer Neural Network model using a bag of N-gram features, which detected the language of the given text. Reduced the model size by weight quantization and feature selection.
  - **DevOps**: Responsible for deploying and scaling REST APIs and maintaining servers in 4+ data centers.
    * Designed, developed, tested and deployed REST APIs to expose the trained NLP models as micro-services.
    * Configured and maintained PostgreSQL, designed and developed table models, and formulated access APIs.
    * Managed GitLab repositories and permissions and created a chatbot with webhooks to keep the team updated.

PROJECTS

- **AI12 Reasoning Challenge** *February 2020 - April 2020*
  Arizona State University *Tempe, USA*
  - Research, development, and code implementation of Information Retrieval module and Prediction module.
  - Implemented code to support GPU inferencing and reduced the prediction time by 1/10th.
  - Performed analysis of 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.

- **Question Answering System** *January 2019 - May 2019*
  Zoho Corporation *Chennai, India*
  - Built a system to automatically answer FAQs from a set of predefined FAQs stored in PostgreSQL.
  - Designed, developed REST APIs, and communicated with clients to define functional and technical requirements.
  - Designed and configured databases and provided support with maintenance and documentation.
  - This system replaced the monotonous work of support engineers in answering fundamental questions.