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 software developer starting in June 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: 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

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 Transformer Model on the RACE dataset using Google Colab and experimented with new models.

Question Answering System ***Zoho Corporation*** January 2019 - May 2019

- Deployed a system to automatically answer FAQs from a set of predefined FAQs stored in PostgreSQL.
- Created REST APIs, automated API testing using postman runner, and interfaced with clients.
- Designed tables, configured databases, and provided support with maintenance and documentation.
- Coordinated with support engineers, to replace the monotonous work of answering fundamental questions.

Industry Classification ***Zoho Corporation*** September 2018 - December 2018

- Constructed text classification model using AllenNLP to classify free-text documents into predefined categories.
- Assessed the data, improved the cleaning pipeline, and experimented with classification techniques.
- Re-engineered the problem to improve performance and achieved about 91% accuracy to predict 45 classes.
- Increased the speed of cleaning the data by optimizing and implementing parallel processing in production.

WORK EXPERIENCE

Research Aide ***Arizona State University, Tempe, Arizona*** August 2020 - May 2021

- Extracted moderation rules from Reddit emails using pandas and TF-IDF vectors after preprocessing.
- Executed data cleaning methods using spaCy, textacy to extract information from the Reddit dataset.
- Converted classification of content moderator emails to the rule violated into a BERT model.
- Compared moderation emails and compiled methods to build trust in people to accept AI moderated emails.
- Retrofitted a bag-of-words model to find Political Polarization using Reddit User data.
- Experimented with tuning a neural network to classify users based on their interaction with the subreddits.