Vignesh Thiagarajan
Software Engineer

WORK EXPERIENCE

SOFTWARE ENGINEER 2
Cadence Design Systems, Boston MA.   NOV 2021 – Present

- Work in a DevOps team to develop/enhance/maintain scalable CI/CD pipeline automation and infrastructure, which are key to the business unit's operations.
- Provide primary operational / engineering support for multiple large-scale distributed software applications including the Version Control System (Perforce), Static Analysis tools, and other development tools used by R&D /product teams. Ensured site-reliability of tools/infrastructure.
- Manage automations surrounding builds, regression testing and releases for products developed by our business unit. Proactively fix bugs with tools and address infrastructure issues.
- Develop enhancements and new features for existing software tools to optimize efficiency and address diverse user needs.
- *Tech Stack - Python, DevOps, CI/CD, LSF, Perforce, Perl, Agile, SDLC, Jenkins, Linux, Git*

SOFTWARE ENGINEER
Apkudo, Dallas TX.   JUL 2021 – NOV 2021

- Developed features and improved workflows in the supply chain consisting of autonomous robotic lines using Python, PostgreSQL, AWS.
- Debugged and fixed various issues in a fast-paced work environment. Communicated with clients, provided support, and developed software according to real-world requirements.
- Automated configuration / deployment of software to physical servers (NUCs) and AWS EC2 instances using Ansible (IaC).
- *Tech Stack - Python, Linux, PostgreSQL, AWS (Cloudwatch, EC2, S3), Git (Gitlab), Jira, Ansible*

SOFTWARE ENGINEER INTERN
Arm Inc, Austin TX.   JAN 2021 – APRIL 2021

- Developed Python scripts used in workflow to optimize computational resources used in running verification tools.
- Developed Dashboards using Dash framework and MySQL which provide an metrics of system performance and drive technical decision making. Used Pytest to test dashboard features.
- *Tech Stack - Python, SQL, DevOps, Flask, Machine Learning, Jenkins, Linux, Git (Gerrit)*

DATA ENGINEER (R&D) INTERN
Ansys Inc, San Jose CA.   JAN 2020 – APRIL 2020

- Automated the processing of large amounts of unstructured data through data pipelines using Python and Spark (PySpark).
- Implemented dashboards with PowerBI and Databricks to help product managers easily consume the data and gain business insights. Documented the workflows and all changes.
- *Tech Stack - Python, Apache Spark, Databricks, SQL, Power BI, Azure Cloud, D3.js*

ACADEMIC PROJECTS

Online Music Store
(*Tech Stack*: *Node.js, Express.js, MongoDB, JavaScript, Restful web service*)
- Created online music store full-stack web application which gives CRUD admin privileges.
- Developed authentication, validation, filtering search and information updation features.

Spark Streaming Twitter Sentiment Analysis
(*Tech Stack: Scala, Spark, Kafka, Kibana, Elasticsearch*)
- Created a Spark streaming application that continuously read data from Twitter about a topic using Apache Kafka. Sentiment Analysis were performed on tweets for particular topics.

Library Management System
(*Tech Stack: Java, MySQL, jQuery, HTML, CSS*)
- Implemented a fully functional library management system to borrow books, update users and calculate fines.
- The GUI application was developed using jQuery and interfaced with MySQL using JDBC connector.

CONTACT

- Lowell, MA
- +1 4695713764
- vigneshthiagaraj@gmail.com
- LinkedIn
- Github

EDUCATION

Master of Science in Computer Science
The University of Texas at Dallas – GPA 3.85/4
Coursework: *Machine Learning, Artificial Intelligence, Design and Analysis of Algorithms, Big Data, Web Programming, Database Design*

Bachelor of Technology in Electrical and Electronics Engineering
Amrita University – GPA 8.64/10
Coursework: *Statistics and Numerical Analysis, Foundations of IT, C Programming*
Honors and Awards: *Graduated with First Class, Distinction (Highest Honors)*

TECHNICAL SKILLS

Programming Languages
Python, Java, R, C, C++, Scala, JavaScript, PHP, Shell, Perl, Groovy

Web Languages
HTML5, CSS3, Bootstrap, AJAX, JQuery, REST, Node.js, Angular 8, JDBC

Databases
MySQL, Oracle DB, NoSQL (MongoDB), PostgreSQL

Big Data Technologies
HDFS, Apache Spark, Apache Hive, Apache Kafka, Amazon S3, Amazon EMR, Databricks

Tools/IDEs
Git, Perforce, Ansible, Jira, Jenkins, VS Code, PyCharm, IntelliJ, Electric Commander, Grafana, Prometheus, Power BI, Tableau, Docker, Kubernetes

Machine Learning Techniques
XGBoost, K means Clustering, Recommender Systems, Support Vector Machine, Random Forest, Naive Bayes, Decision Trees, KNN, Logistic Regression, Linear Regression

Deep Learning
Convolutional Neural Networks, Multi-Layer Perceptron, Recurrent Neural Network

EXTRA CURRICULAR

- Graduate Assistant (Grader) for the undergraduate course CS3340 (Computer Architecture) at UTD during Fall' 19.
- Coding instructor at CS Outreach UTD during Fall '18 and Summer '19.
- Published paper - "Z-Source Dual Active Bridge Bidirectional AC-DC Converter for Electric Vehicle Applications", IEEE PEDES Conference, 2018: Link