Deepak Vasuki Kashyap

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Education

Master of Science in Computer Science   May 2023
University of Florida, Gainesville, Florida   **GPA**: **3.83**
- Completed Courses– DOSP, Algorithms, Mobile Networking, Neural Networks, Software Engineering, Pattern Recognition.

Bachelor of Engineering in Computer Science   May 2018
Visvesvaraya Technological University, India   **GPA**: **3.80**
- Completed Courses – OS, Microprocessors, Data Structures, OOP, Algorithms, Software Engineering.

Work Experience

Indian Institute of Technology Madras, Chennai, India

Project Associate   July 2019 - July 2021
- Designed and maintained a Redis database for storing various kinds of data generated in a 5G network. Developed novel software in C++ that reduced the store time by 200%, retrieve time by 150% and update time by 150% for JSON data.
- Developed a novel unstructured parsing algorithm and droves its adoption to 100% across various network functions.
- Led a team of 10+ members that worked on containerizing network functions and integration of access and mobility and user subscription functions.
- Designed and developed functions for user authentication, user identification handling, user session management, maintaining and furnishing network policy data, exposure data and subscription data. Experience with AGILE and SCRUM methodology.
- Implemented extensive test code that provided 100% coverage for automated testing of API's between UDR/UDM and other network functions.

Infrrd Pvt. Ltd., Bangalore, India

Software Engineer   July 2018 - June 2019
- Developed a full-stack web application which took error-ridden documents as input, processed the document, and rendered the document visually for the client to manually correct. Used C++, Python, Vue JS, JavaScript, Cypress, and MongoDB.
- Developed and integrated 25+ features like in-place correction, real time update for corrected documents etc. that led to over 50% increase in usage time of the correction platform by existing clients.
- Assessed UI/UX design for technical feasibility and standardized output with new responsive, mobile-first approach which increased customer usage across mobile devices.
- Supported testing automation task by developing 50+ automated end-to-end tests using Cypress and Vue JS.

Projects and Publications

HR Management Software   Jan 2022 - April 2022
- Developed a robust Human Resource Management software (Web application) using Vue JS to develop front-end, Golang to develop backend and MySQL database.
- Developed features like, account type differentiation, user authentication, user leave application, user messaging service, account notification system and employee onboarding.

Digit and Character Classification using Single Layer Perceptron and Multi-Layer Perceptron   Jan 2022 - April 2022
- Implemented a single-layer perceptron (SLP) and a multi-layer perceptron (MLP) to classify digits and characters in python using Jupyter Notebook, Pytorch, Keras, Matplotlib and Pandas.
- Trained and tested the models on a dataset that I created. Also performed data visualization for the model performance using matplotlib.

Evaluation of Metrics and Models for Matching Individuals using UF Wireless LAN Traces   Aug 2021 - Dec 2021
- Developed a model and identified metrics to model the mobility and behaviour pattern of people on university campus using Wireless LAN traces. Identified population density patterns at various locations on campus.
- The patterns identified were used to predict the future behaviour of users using Machine Learning. Used Python, Pandas, Keras, Matplotlib, Jupyter Notebook etc for this.

Gossip Protocol Simulator   Aug 2021 – Dec 2021
- Developed a Gossip protocol simulator using actor model and functional programming language F# for 2D and 3D models. Learnt about various Distributed Operating Systems concepts, Actor model, Networking and security issues and solutions.

Developing Twitter Clone   Aug 2021 - Dec 2021
- Implemented a twitter clone capable of servicing multiple users concurrently, exchanging tweets, using hashtags and mentions, following other users, and a UI for accessing the application.
- Implemented a web user interface for users to access the twitter clone. Project was implemented using F#, JavaScript, and VueJS.

Technical Skills

Programming Languages: C++ (Proficient), Python (Intermediate), JavaScript (Intermediate), C Programming (Proficient), Java (Beginner), F# (Beginner)

Frameworks, Cloud Services, Databases, Web technologies and Operating Systems: Vue JS, React, Cypress, Mocha, Amazon Web Services (AWS), Redis, MongoDB (Limited), HTML5, CSS, JSON, Bootstrap, Mac OS, Linux, Windows, VMWare Fusion, GitHub

Technical Concepts and Methodologies: REST API development, Object Oriented Programming, RESTful Architecture, Docker, Virtualization concepts, Web Development Cycle, Networking, Distributed and parallel systems, web application development, Software Development, AGILE, Scrum, Test Driven Development, DevOps Deployment Methodology