Mani Sankar T

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Experience

IBM India Systems Development Lab Bangalore, India

Senior System Software Engineer **Sep 2023 – Present**

- Integrated SharedKey & SharedKeyLite Auth Support on DFSMSdfp CDA, allowing the native z/OS APIs to communicate to the Azure Blob and File Storage.
- Orchestrated the end-to-end development of a new API, achieving a 50% improvement in process efficiency and a 20% improvement in memory management.
- Completed 12 critical bug fixes and enhanced performance by 30%, assessed through rigorous testing, by implementing targeted improvements and optimizations.

Software Engineer **Jul 2022 – Aug 2023**

- Spearheaded the integration of five S3-compatible authentication methods into the Cloud Data Access product, enhancing versatility and resulting in a 30% increase in user compatibility.
- Engineered a cost-effective Flask-based proxy server for API testing, resulting in a 100% reduction in server costs and a 50% decrease in testing time.
- Facilitated multiple informative demo sessions on the proxy server usage, improving internal team efficiency and product understanding by 40%.
- Led a team of 5 in a Hackathon to develop a Low-Code No-Code platform for PL/X, accelerating coding processes by 25% and reducing development time by 35%.

Software Engineer Intern **Jan 2022 – Jun 2022**

- Swiftly and effectively incorporated the project specifications for the newly developed product, Cloud Data Access.
- Collaborated effectively as an intern, mastering the Cloud Data Access product and developing over 50 test cases, enhancing product reliability by 10%.
- Conducted several internal demo sessions on Cloud Data Access, increasing team knowledge and engagement by 30%.

Projects

Image Classification using CNN to detect and diagnose Diabetic Retinopathy — Python, CNN, DL

- Guided a team of 5 in developing a highly effective ResNet50 Architecture CNN model for Diabetic Retinopathy classification, as measured by a training accuracy of 91% and a validation accuracy of 80%, by implementing fundamental data augmentation and hyperparameter tuning techniques.

Crop disease detection using Generative Adversarial Networks — Python, GAN, Computer Vision, DL

- Constructed a GAN-based model designed to detect diseases in tomato plants, and it has proven effective in accurately classifying these diseases, achieving swift results with minimal computational time. The model has been implemented as an API and seamlessly integrated into a user interface, allowing users to conveniently access the software from their devices.

Simplified Version of an Online Help Desk — Python, Flask, Web sockets

- Developed a web application that allows for multiple client server interactions using the concepts of socket programming. The application featured the addition of new functionalities to the existing architectures such as zero data logging, private rooms, and options to request and ignore chat requests.

SOS - An Emergency App for finding the nearest location of a service — Flutter, dart, APIs, Emergency Services

- Catalogued existing gaps in android apps for emergency services. Spearheaded a team of 5 to develop a flutter based mobile application that uses Google Maps API to actively track and notify the nearest location of a service based on the search parameter. It also includes various emergency features such as Alert-SMS and live location sharing which can be enabled with a single click.

Technical Skills

- Languages: C, C++, Python, PL/X, HTML, CSS, JavaScript, Java, SQL (PostgreSQL, MySQL)
- Frameworks: Flask, Django, React.js, PyTorch, TensorFlow, scikit-learn
- Tools: Git, Jenkins, S3 Compatible Authentication Methods

Education

PSG College of Technology, Anna University Coimbatore, India

Bachelor of Engineering in Computer Science **August 2018 – May 2022**

- Grade point: 8.55/10.0, First Class with Distinction

Achievements

- **Entrepreneur Award 2023** - Recognized globally by IBM for delivering sustainable outcomes and creation of solutions-focused results.
- **Star of the Month - June 2024** - Acknowledged by IBM ISDL for my dedicated efforts and timely delivery in implementing SharedKey and SharedKeyLite Authentication support in the CDA (Cloud Data Access) component of DFSMSdfp.
- **Star of the Month - December 2022** - Acknowledged by IBM ISDL for my focused efforts in researching and experimenting alternative solutions
- **First Prize – "Most Compelling Prototype and Business Value Presentation" - National Level OpenCBR Hackathon 2019**, hosted by **Leeds Social Sciences Institute, University of Leeds, London**

Publications

- **CDA Enhancements - Azure blob and File Service on DFSMSdfp CDA -** IBM Z and LinuxONE Community
- **Image Classification using CNN to Diagnose Diabetic Retinopathy -** Springer Book series "Lecture Notes on Data Engineering and Communications Technologies"