VIRAJ SONAJE

+1 (480) 803-8756 | virajsonaje.github.io | vsonaje@asu.edu | linkedin.com/in/virajsonaje | github.com/VirajSonaje

EDUCATION

Arizona State University   **Aug 2021 - May 2023**
Master of Science (MS) in Computer Science, *GPA: 3.83/4.00*

Pune Institute of Computer Technology (PICT), India   **Jul 2015 - Jun 2019**
Bachelor of Engineering (BE) in Electronics and Telecommunications, *CGPA: 8.93/10.00*

SKILLS

- **Programming Languages:** Java, Python, C++, JavaScript, TypeScript, Bash
- **Web Tech. :** Spring Boot, Django, Flask, React.js, Node.js, Angular, Thymeleaf, Hibernate, Bootstrap, Material UI, jQuery, HTML, CSS, Rest API
- **Database and DevOps:** MS SQL, MySQL, H2, PostgreSQL, MongoDB, DynamoDB, AWS (EC2, SQS, S3, Lambda), Jenkins, Git.
- **Machine Learning/Data Science:** TensorFlow, Scikit-learn, Keras, OpenCV, Pandas, NumPy, Matplotlib, NLTK, PyTorch
- **Relevant Coursework:** Software Security, Distributed Database Systems, Applied Cryptography, Cloud Computing, Machine Learning, Deep Learning, Data Mining, Data Structures and Algorithms, and Object-Oriented Programming (OOP).

PROFESSIONAL EXPERIENCE

Integrated Technology Corporation   **July 2023 - Present**
Software Engineer

- Spearheaded the development of an advanced software version to accommodate over 15 cutting-edge features & complex wafer designs for enhanced user experience.
- Enhanced desktop application functionality by implementing backward compatibility, facilitating seamless import and export of motherboard and probe card files, & ensuring smooth transition for over 500 users across the US and Europe.
- Technology Stack: C#, .NET, OpenCV, MS SQL

DHL Global Forwarding   **May 2022 - Apr 2023**
Software Engineer Intern

- Enhanced invoice audit web application to provide better insights to business users regarding invoice errors.
- Developed front-end and back-end for invoice search functionality on 20+ attributes with daily 200,000+ new invoice updates.
- Took ownership of requirements gathering, implementation, and presentation of developed features to stakeholders and business users, while single-handedly leading development efforts.
- Led an intern team for the creation of mobile forms accessible across devices for warehouse workers, resulting in streamlined processes, reduced paper trail, and optimized data management.
- Technology Stack: Spring Boot, Java, Angular, MS SQL

HSBC Software Development India   **Jul 2019 - Jun 2021**
Software Engineer

- Spearheaded an end-to-end web application to manage BYOD requests, incorporating multi-level approvals, and integrating with Microsoft Intune for device whitelisting. Resulted in improved security and streamlined device management processes.
- Designed and developed a web application to automate software release requests impacting 300,000+ users.
- Actively participated in the agile development process, including daily stand-ups, sprint planning, and retrospectives.
- Responsible for reverse-engineering the legacy internal search engine web application and upgrading its indexing framework (SIFIN - Search Indexing Framework Internal) whose data is accessed by several tier-1 applications.
- Initiated and secured approval for a project to extract keywords using NLP techniques to cluster IT incidents and identify the underlying application issues. Created new classification items for SharePoint and SIFIN based on the clustering results.
- Proposed and led the implementation of a CI/CD pipeline for the SharePoint environment to improve the deployment process.
- Technology Stack: Spring Boot, Java, Django, Python, Angular, jQuery, Thymeleaf, MS SQL, NLTK, Scikit-Learn, Jenkins, Git

ADDITIONAL EXPERIENCE

Image Captioning Service | *Python, Keras, TensorFlow, PyTorch, Heroku*   **Dec 2022**
- Orchestrated and Implemented an image captioning system using three approaches: CNN-LSTM, attention models, and a transformer based on the paper "All You Need is Attention", trained on the Flickr8k dataset.
- Conducted performance evaluation of the models using metrics such as Bleu scores, METEOR, CIDEr, Rouge-L, and Spice, with the transformer model outperforming the others and generating coherent captions.
- Deployed the models on Heroku to provide an accessible user interface for users to test the image captioning system.

Spatial Data Operations Console | *JavaScript, Flask, Python, Scala, Apache Sedona, DeckGL*   **Dec 2022**
- Built a user-friendly web app that enables users to perform geospatial operations on trajectory datasets with Apache Sedona.
- Utilized DeckGL for rich trajectory visualizations on the front end providing a seamless user experience.

AWS Auto Scalable Image Recognition service | *Flask, Python, Boto3, AWS (EC2, S3, SQS, Lambda, DynamoDB)*   **Mar 2022**
- Built an elastic application that can automatically scale out on-demand cost-effectively by using the IaaS and PaaS Cloud.
- Achieved a benchmark of successfully processing 100 concurrent requests in 60 sec and creating up to 20 instances on the fly.
- Enhanced the application to process real-time video using AWS lambda and an edge device that stored results in DynamoDB.
- The new system was more efficient and was able to create 600 invocations in 300 seconds with an 87% accuracy.