VIRAJ SONAJE

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EDUCATION

Arizona State University   **Aug 2021 - May 2023**
Master of Science (MS) in Computer Science   *GPA: 3.73/4.00*
Coursework: Foundations of Algorithms, Foundations of Machine Learning, Software Security,
Distributed Database Systems, Applied Cryptography, Cloud Computing, Semantic Web Mining,
Introduction to Deep Learning, Modelling and Simulation/Applications.

Pune Institute of Computer Technology (PICT), India   **Jul 2015 - Jun 2019**
Bachelor of Engineering (BE) in Electronics and Telecommunications   *CGPA: 8.93/10.00*
Coursework: Data-Structures and Algorithms, Object-Oriented Programming,
Computer Networks and Security, System Programming and Operating Systems.

SKILLS

- **Programming Languages:** Java, Python, C++, JavaScript, TypeScript, Bash
- **Web Technologies:** Angular, Spring Boot, Django, Flask, Thymeleaf, Hibernate, Bootstrap, Material UI, jQuery, HTML, CSS, JUnit
- **Machine Learning/Data Science:** Tensorflow, Scikit-learn, Keras, OpenCV, Pandas, NumPy, Matplotlib, NLTK
- **Database Technologies:** MS SQL Server, MySQL, H2, PostgreSQL, MongoDB, DynamoDB
- **DevOps Technologies:** Jenkins, Maven, Git, AWS (EC2, SQS, S3, Lambda)
- **Developer Tools:** Postman, JIRA, MATLAB

PROFESSIONAL EXPERIENCE

DHL Global Forwarding   **May 2022 - Present**
Product Solution Intern
- Enhanced the No Invoice left Behind web application to provide insights to business users regarding costs incurred by errors caused in generating invoices for shipments.
- Developed front-end and back-end for invoice search functionality on 20+ attributes with daily 200,000+ new invoice updates.
- Technology Stack: Spring Boot, Java, Angular, MS SQL

HSBC Software Development India   **Jul 2019 - Jun 2021**
Software Engineer
- Developed an end-to-end web application to handle Bring Your Own Device (BYOD) requests for whitelisting mobile devices incorporating multi-level approvals on Microsoft Intune.
- Designed and developed a web application to automate software release requests impacting 300,000+ users.
- 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.
- Handled HSBC's entire SharePoint infrastructure, one of the largest in the world, along with its migration, application issues, and development of PowerShell Scripts for monitoring and reporting.
- Leveraged NLP techniques to extract keywords and K-Means to cluster IT incidents and identify the underlying application issues. Created new classification items for SharePoint and SIFIN based on the clustering results.
- Worked on developing a CI/CD pipeline for the SharePoint environment.
- Technology Stack: Spring Boot, Java, Django, Python, Angular, jQuery, Thymeleaf, MS SQL, NLTK, Scikit-Learn, Jenkins, Git

PROJECTS

Image Recognition as a service | *Flask, 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 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 accuracy of 87%

Spectrum Sensing using Machine Learning in Cognitive Radio | *Python, MATLAB, SVM*   **Mar 2019**
- Proposed a spectrum sensing classifier using Support Vector Machines for narrowband and wideband spectrums.
- Implemented classifier using Scikit-learn. Simulated the model using MATLAB for dataset generation.

CO-PO Attainment (Course Outcomes - Program Outcomes) | *Java, MySQL*   **May 2017**
- Stand-Alone Java application to store results and assess the performance of students and generate reports for a course.
- Collaborated with professors to test the software and is actively used by the department.

ACHIEVEMENTS

- Secured First prize at Departmental Competitive Coding Competition at PICT, Pune.
- Completed Cryptography and Security Workshop, stood First in the Cipher Implementation Challenge.
- Organizer and Teaching Aide for Android Development Workshop for students from all over the city.