ASHWATH SREEDHAR HALEMANE

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EDUCATION

Rochester Institute of Technology, Master of Science in Computer Science — Aug 2021 - May 2024

Courses: Data Structures, Analysis Of Algorithms, Advance Object Oriented Programming(OOPS), Big Data, Database design & implementation, Web Services & SOA, Computer Vision, Computer Graphics, Cryptography, Cybersecurity, Distributed Systems

SKILLS

Languages & Frameworks: Java, Python, JavaScript, Go(Beginner), SQL, Django, Express, Node.js, Angular
Machine Learning: NumPy, Matplotlib, Pandas, Scikit-Learn, TensorFlow, PyTorch, Keras
Databases & Cloud Technologies: MySQL, PostgreSQL, MongoDB, Redis, AWS, Google Cloud Platform (GCP)
Development Tools: Git, Linux, REST APIs, Postman, JUnit, PyTest
Devops Tools: Docker, Jenkins, Kubernetes, Terraform(Beginner), Prometheus, Splunk

EXPERIENCE

Application Security Engineer Intern — May 2022-Aug 2022, May 2023 - Aug 2023
Infinitus AI — *San Francisco, California*

- Developed scripts to fetch active Google Secrets tokens, ensuring that developers and service accounts used the latest tokens. Developed Bash scripts to detect discrepancies in NLP model versioning across staging, production, and local environments. This automation enhanced reliability and reduced manual intervention by 85%, significantly minimizing production issues, including severe incidents. Tech: Go, Python, GCP Secret Manager, Shell scripting.
- Engineered a robust Log Analysis system deployed on private GCP unveiling 20+ indicators of compromise(IOCs) from infrastructure logs. Automated Incident Response workflow that improved security posture & reduced manual work by 80%. Tech: Go, Python, Pub/sub, Cloud Logging, Cloud Scheduler, Cloud Functions, Cloud Storage, BigQuery, Shell scripting
- Worked on API integration for automation to facilitate vulnerability ticket creation in Jira to improving efficiency and cutting workload by 90%. Integrated Snyk's SAST into the CI/CD pipeline, implementing a fail-fast mechanism that reduced application risk at scale. Detected and prevented over 10 high-severity vulnerabilities, contributing to a 30% reduction in security breach risk. Tech: Python, PyTest, API integration.

Senior Software Engineer — May 2017 - Jun 2021
CGI Inc — *Bangalore, India*

- Developed and optimized custom IAM endpoints, improving authentication flows and API security. Enhanced system performance through optimized cloud scheduler configurations, reduced response times by 25%, and improved MySQL query performance by 40%. Tech: ForgeRock IAM, Java, MySQL, OAuth 2.0, OpenID Connect
- Developed a Full-Stack Enterprise Application using the MEAN stack to manage and deploy language-agnostic applications, implementing a RESTful API for CRUD operations, Docker and Kubernetes for containerization and scaling. Tech Used: MEAN Stack(MongoDB, Express.js, Angular, Node.js), Docker, Kubernetes, Pino, Postman, Karma, Protractor, Moment.js
- Led the development of a test automation suite using Robot Framework for security testing, improving test accuracy by 45% and reducing false positives by 35%. Streamlined the penetration testing process, saving clients $50K USD by enhancing software quality assurance efficiency and reducing manual testing time.

PROJECTS

Segmentation of Cotton Field Images using Deep Learning — Mar 2023 - May 2023

- Designed and implemented a deep learning-based image segmentation pipeline for classifying cotton field images into four irrigation treatment categories. Achieved 82.64% accuracy by fine-tuning a pre-trained ResNet50 convolutional neural network (CNN) model. Tech: Deep Learning, ResNet50, MATLAB, Scikit-learn, Pandas, Convolutional Neural Networks (CNN)

Image Processing for Cartoon Filter and Dice Counting — Jan 2023 - Mar 2023

- Developed two image processing applications: a cartoon filter using edge detection and bilateral filtering for real-time cartoon-style effects, and a dice counting program that accurately identifies and counts dice faces from unclear images using contour detection, thresholding, and image pre-processing techniques like Gaussian blur. Tech Used: Python, MATLAB, NumPy, Mahalanobis Distance, Edge Detection

Analyzing the impact of COVID-19 on Crime Patterns using Data Mining — Feb 2022 - May 2022

- Performed association rule mining on a large crime dataset to uncover correlations between crime types and locations. Utilized the Apriori algorithm for ItemSet mining, identifying 6 distinct crime patterns through support, confidence, and lift metrics. Tech: Data Mining, Association Rule Mining, Apriori Algorithm, NumPy, Pandas, Matplotlib, PostgreSQL