

## TECHNICAL SKILLS

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**Languages:** Python, C, C++, SQL, R, MongoDB, HTML, CSS, PHP

**Frameworks:** React.js, Node.js, Flask, Numpy, Pandas, Matplotlib, TensorFlow, Pytorch, OpenCV, FastAPI

**Developer Tools:** Spark, Jupyter, Git, CI/CD, Tableau, Hadoop, powerBI

## EXPERIENCE

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### Artificial Intelligence Engineer

Sep 22 - Present

*Hephium LLC*

*Miami, FL*

- Led the development of computer vision models for object detection in the LumiML project, a cloud app focused on health monitoring and providing expert recommendations for plant care using python.
- Utilized Python libraries such as TensorFlow, PyTorch, and OpenCV to implement advanced machine learning algorithms and image processing techniques.
- Engineered data pipelines for preprocessing using Docker, enabling scalable model training and deployment using AWS.
- Annotated, labeled and preprocessed the dataset comprising over 1000 images.
- Accomplished a 3.2% improvement in accuracy by optimizing the Mobilenet-SSD model.
- Identified and resolved performance bottlenecks in the pipeline, improving efficiency by 25% without additional resource expenditure.

### Software Engineer - I, Product

Sep 21 - Aug 22

*Freshworks Technologies*

*Chennai, India*

- Automated and optimized business logic for the FreshService product (SaaS) by implementing scalable Python & REST API scripts, portal customizations using HTML, Angular, Firebase.
- Collaborated with cross-functional teams in agile environment, represented customers, and troubleshooted over 1500 Level 2 queries & built analytic data with powerBI.
- Continuous integration/deployment pipeline integration, pull requests, code reviews and monitoring by utilizing AWS services such as AWS CodeBuild, AWS CodeDeploy, and AWS CodePipeline.

### Research Engineer (Python)

Sep 19 - Oct 21

*Solarillion Foundation*

*Chennai, India*

- Spearheaded the development of end-to-end web applications using Python and Node.js. Achieved a 15% increase in efficiency by optimizing data processing pipelines, resulting in faster insights generation and model training.
- Led a team in conducting research on flight delay prediction and malware detection, leveraging Python-based tools and frameworks. Implemented novel algorithms that reduced false positives by 20% in malware detection, enhancing system reliability and security.
- Collaborated with research teams to analyze dataset, and derive actionable insights for project stakeholders using Tableau.

## EDUCATION

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### University at Buffalo, The State University Of New York

Aug 22- Jan 24

*Master of Science in Data Science (Engineering Science)*

*Buffalo, NY*

- Relevant Courses: Distributed systems, Database Fundamentals , Programming & Data Structures, Data Mining

### Anna University

May 17 - Jun 21

*Bachelor of Technology in Information Technology*

*Chennai, India*

## PROJECTS

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### Attention Span Detection in Online Education | Python, Flask, OpenCV, PostgreSQL

- Developed an advanced proctoring system utilizing various computer vision techniques to prevent cheating during online classes and exams.
- Implemented features to detect and recognize factors such as face, body position change, eye position tracking, blink rate, and background noise level.
- Optimized performance and reduced inference time by compiling OpenCV's DNN module and Caffe with CUDA support.
- Achieved an overall accuracy of 84.6% & published at the 2020 IEEE MIT (URTC) conference in Cambridge, MA. ([Link.](#))

### Real-Time Smart Vehicle Surveillance System | Python, Flask, MongoDB, Git

- Implemented computer vision techniques to recognize and track vehicles in real-time.
- Extracted attributes of the vehicle such as Make, Model, Color, Damage, and License plate.
- Achieved an accuracy of 90.4% in vehicle attribute recognition & published at the 4th International Conference on Applied Sciences, Engineering, Technology, and Management conference in Dubai. ([Link.](#))

**Certifications:** Cloud Computing, IIT-K (Gold: Top 2 % among 50,000.), Azure Fundamentals (AZ-900) - pursuing.