






Anol Kurian Vadakkeparampil

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Highly accomplished professional with a Masters in Computer Science from the University of Florida and a Bachelors in Computer Engineering from the University of Mumbai. Proven track record as a Senior Software Engineer and Software Engineer at Apisero and GEP respectively, showcasing expertise in data analysis, full-stack development, and software engineering. Skilled in machine learning techniques, team leadership, and delivering projects within challenging timeframes.

EDUCATION

University of Florida (Scholarship – Achievement Award)

Aug 2022 - June 2024

Masters in Computer Science (GPA: 3.61 - SEM II)

University of Mumbai

July 2016 - Aug 2020

Bachelors in Computer Engineering (GPA: 8.20)

WORK EXPERIENCE

University of Florida

June 2023 – Aug 2023

Research Assistant - Volunteer

- Developed a website using React, Node.js with Express Framework, SQL Server, and open-source tools like Mol* (Molstar) for displaying 3D visualizations of the lab's proprietary protein data ([Repo – Link](#)).
- Collaborated with a team of experts to develop innovative solutions and push the boundaries of scientific research projects like AI based protein design and Deep Learning for morphological profiling.

Apisero (Kipi.bi)

Feb 2022 – Apr 2022

Senior Software Engineer/Developer

- Leveraged 100GB of GDELT (Global Database of Events, Language, and Tone) data to establish a correlation between stock index fluctuations and international news, delivered under tight deadlines.
- Guided and led 5 team members** in training projects for [kipi.bi \(Link\)](#) by monitoring code implementation of **data warehousing and visualization** concepts, using **Snowflake, Tableau, Python and AWS**.

GEP

Aug 2020 – Jan 2022

Software Engineer/Developer (Promoted from Associate)

- Developed and delivered a robust Inventory Management (IM) module for [gep.com \(Link\)](#) as a full stack developer in a high-paced and versatile team environment, fostering cross-functionality across 5 departments.
- Designed and owned **5 workflows (Frontend – Backend – DB), 15 client-facing, and internal APIs (REST) using Angular 2+(Plugin Architecture), C# (ASP.NET Core - Onion Architecture), Microsoft Azure (Cloud, CI/CD), SQL Server, Elasticsearch, Kibana and MongoDB**.
- Implemented robust systems to generate usage reports across systems, enabling data-driven decision-making and improving overall efficiency for clients by 20%.
- Established a real-time inventory tracking system across multiple warehouses and locations, providing accurate counts on-demand.
- Devised and deployed a cloud-based file storage solution, resulting in seamless file management and easy retrieval for various workflows, enhancing collaboration, and a 70% reduction in file handling time.
- Developed and executed a highly efficient workflow for document generation (leveraging OCR capabilities) and management to track inventory movement between warehouses.
- Streamlined the process of creating movement request documents within the system, significantly reducing user clicks by 35%.
- Significantly contributed to revamping the core system to accommodate variable client requests and configurations, ensuring 100% scalability.
- Instructed and mentored new hires and freshers, reducing onboarding time by 20% and providing support in debugging and issue resolution.
- Recognition:** “Team Player” by Engineering Manager in Kudos Awards.

PROJECTS

Mitigating adversarial and privacy attacks on CNN models

Mar 2023 – June 2023

Tech: Python, Machine Learning, Neural Networks, TensorFlow, NumPy, Pandas, Scikit-learn, OpenCV.

- Conducted research on **defense mechanisms against adversarial examples, evaluating and comparing 8 different methods** including smoothing techniques, noise addition, denoising techniques, color space reduction, and autoencoders.
- Constructed a final defense using a combination of Autoencoder and Local Median Smoothing technique, maximizing effectiveness against adversarial and privacy attacks, while minimally affecting benign accuracy as is demonstrated in [project presentation \(Link\)](#).
- All approaches evaluated through 4 adversarial attacks and 3 privacy attacks; wherein final defense achieved an accuracy in range of 65% to 85% depending on attack which is an improvement of approximately 138%.

Repackaging in Third-Party Marketplaces

Oct 2022 – Dec 2022

Tech: Python, Androguard, ADB, Context Triggered Piecewise Hashing.

- Investigated repackaging in 4 third-party android marketplaces, conducting an exploratory study and **identified repackaged apps by comparing signatures of their dex-codes** to those of reference apks from the Google Playstore.
- Examined 741 apps (excluding reference: 300 apps), finding that 3% had heavy repackaging and 7% had minor signature discrepancies as is shown in [poster presentation \(Link\)](#).

Algorithms Programming Project

Aug 2022 – Dec 2022

Tech: Java, Algorithms.

- Successfully developed and rigorously tested 5 versions of 3 different algorithms, progressively increasing the complexity of implementation.
- Demonstrated expertise in handling various algorithmic approaches, including Brute Force, Greedy Approach, Divide and Conquer, and Dynamic Programming (Recursive & Iterative).

Distributed Message Exchanger - Twitter Clone

Aug 2022 – Dec 2022

Tech: Erlang, Distributed Operating System Principles

- Developed an efficient Twitter clone in Erlang using an Actor model and WebSocket interface and successfully tested the simulator for 90,000 users.
- Implemented a secure and scalable system architecture with isolated nodes controlled by a global master Node, reducing downtime by 80% and data loss by 75%, while also incorporating essential features such as subscribe, follow, and retweet.

Interview Evaluation System

June 2019 – Oct 2020

Tech: ML, Neural Networks, Python (Flask), Tensorflow, OpenCV, MongoDB, Watson Speech

- Engineered and integrated a **mock interview platform that employs ML techniques to evaluate candidate confidence and suitability for specific roles** as is demonstrated in [project presentation and demo \(Link\)](#).
- Utilized image processing to provide an assessment of expressions (63% accuracy), ASR to convert speech to text, and applied NLP to evaluate fluency in language and relevance of content.

Publication: Automated Training for Job Interviews in International Journal of Computer Trends and Technology ([2020 Volume-68 Issue-3 \(Link\)](#))

SKILLS

Programming Languages: C#, Python, C/C++, Java **Frameworks:** Angular 7, HTML/CSS, JavaScript, TypeScript, Flask, ASP.NET Core, OpenSSL
Databases: SQL Server, MongoDB, Elasticsearch **Architectures/Concepts:** Debugging, MVC, Plugin(Angular), Full Stack, CI/CD, REST, Onion
Data Science: Machine learning, Deep Learning, OpenCV, Tensorflow, Pytorch, Keras, Numpy, Pandas, Computer Vision,
Tools: Visual Studio/Studio Code, Word, PowerPoint, Excel, Git/GitHub, Postman, AWS/Azure/GCP (Cloud), Docker, Agile, Jira, Kibana, Tableau, Collab

ACADEMIC COURSES

Sem 1: Analysis of Algorithms, Distributed Operating System Principles, Computer and Network Security

Sem 2: Mathematics for Intelligent Systems, Trustworthy Machine Learning, Engineering Leadership

Sem 3 (Upcoming): Machine Learning, Advanced Topics in Data Science, Advanced Data Structures

CERTIFICATIONS (COURSERA)

- Specialization: Machine Learning - Stanford University and DeepLearning.AI** Present
 - Supervised Machine Learning: Regression and Classification (Completed)
 - Advanced Learning Algorithms
 - Unsupervised Learning, Recommenders, Reinforcement Learning
- Specialization: Deep Learning - Stanford University and DeepLearning.AI** Present
 - Sequence Models
 - Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization
 - Convolutional Neural Networks
 - Structuring Machine Learning Projects
 - Neural Networks and Deep Learning
- SQL for Data Science - University of California, Davis Nov 2021
- Machine Learning – Stanford University Nov 2021
- Introduction to Game Development - Michigan State University July 2020
- Basic Elements of Design: Design Principles & Software Overview – University of Colorado Boulder July 2020
- Introduction to XR: VR, AR, and MR Foundations - Unity July 2020
- More C# Programming and Unity - University of Colorado System July 2020
- Introduction to C# Programming and Unity - University of Colorado System June 2020
- Specialization: Developing Applications with Google Cloud - Google Cloud** May 2020
 - Google Cloud Fundamentals: Core Infrastructure
 - Getting Started with Application Development
 - Securing and Integrating Components of your Application
 - App Deployment, Debugging, and Performance
- Using Python to Access Web Data - University of Michigan April 2020