Anol Kurian Vadakkeparampil

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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

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, 15 client-facing, and internal APIs using Angular 2+(Plugin Architecture), C# (ASP.NET Core MVC), 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, Androgaurd, 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).

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 **Concepts/Practices:** Debugging, MVC Design, Plugin Architecture, Full Stack, CI/CD
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
Courses/Certifications: Developing Apps with Google Cloud (Specialization – 4 Courses) || Machine Learning by Stanford–Online || C# and Unity by University of Colorado || SQL for Data Science by UC Davis