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)

SKILL SET

Relevant Coursework: Analysis of Algorithms, Distributed Operating System Principles, Computer and Network Security, Mathematics for Intelligent Systems, Trustworthy Machine Learning**,** Engineering Leadership
Programming: C#, C/C++, Python, Java, Full Stack Development, Angular 7, HTML/CSS, JS, SQL Server, MongoDB, Flask, ASP.NET Core, MVC, Machine learning, Deep Learning, OpenCV, TensorFlow, Pytorch, Keras, Numpy, Pandas, Computer Vision, Software Debugging, OpenSSL
Tools: Visual Studio, Word, PowerPoint, Excel, Git/GitHub, Postman, AWS/Azure/GCP (Cloud), Docker, Agile, Jira

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.
- **Coached and led 5 team members** in training projects for kipi.bi (Link) by monitoring code implementation of **data warehousing and visualization** concepts, **using Snowflake and Tableau**.

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, leading to refined **cross-functionality across 5 departments.**
- Designed and owned 4 workflows, 15 client-facing, and internal APIs using **Angular 2+(Plugin Architecture), C# (ASP.NET Core MVC), Microsoft Azure (Cloud), SQL Server, and MongoDB**, resulting in elevated performance and reliability.
- Instructed new hires and freshers, **reducing onboarding time by 20%**.

CURRICULAR PROJECTS

Mitigating adversarial and privacy attacks on CNN models **Mar 2023 – June 2023**

Technology/Languages: Python, Machine Learning, Neural Networks, TensorFlow, NumPy, Pandas, Scikit-learn, OpenCV.

- Conducted research on **defense mechanisms against adversarial examples, assessing 8 different methods** including smoothing techniques, noise addition, denoising techniques, color space reduction, and autoencoders.
- Designed a **final defense using a combination of Autoencoder and Local Median Smoothing technique** that maximally reduces the effectiveness of 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%.**

Algorithms Programming Project **Oct 2022 – Dec 2022**

Technology/Languages: Java, Algorithms

- **Developed and tested 5 versions of 3 different algorithms** with increasing complexity, including Brute Force, Greedy Approach, Divide and Conquer, and Dynamic Programming (Recursive & Iterative), resulting in a deeper understanding of the algorithms.

Repackaging in Third-Party Marketplaces **Oct 2022 – Dec 2022**

Technology/Languages: Python, Androgaurd, ADB, Context Triggered Piecewise Hashing.

- Investigated repackaging in 4 third-party android marketplaces, through 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**

Technology/Languages: ML, Neural Networks, Python (Flask)

- Designed and implemented 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**.
- Deployed ahead of schedule, using **Python Flask framework, TensorFlow, Multithreading, OpenCV, MongoDB, and Watson Speech services**, resulting in refined interview training for candidates.

PUBLICATION

Automated Training for Job Interviews **Feb 2020 – Apr 2020**

International Journal of Computer Trends and Technology

Proposed an ML-driven system to train interview candidates using historical data from specific companies, providing insights on confidence and role relevance (IJCTT:2020 Volume-68 Issue-3 (Link))