ALAN B. PALAYIL

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Professional Summary

Application Development Analyst with background in Cybersecurity, driving automation and optimization of high-volume financial data workflows. Core expertise in Python, SQL, and Cloud Architectures (AWS/Azure) to build resilient, scalable solutions for Commercial Mortgage Loan and Derivatives, Spearheaded the development of a dynamic PAM message-generator that reduced manual interventions, ensuring uninterrupted data delivery to our applications and data warehouse. Proven collaborator across Agile teams, adept at designing end-to-end test plan. Passionate about advancing research in data security and dynamic processing, with a long-term commitment to innovating with both academic and industry environments.

Technical Skills & Tools

- **Languages & Frameworks:** Python, Java, C#, SQL, JavaScript, React
- **Databases & ETL:** PostgreSQL, MySQL, Oracle, Azure Synapse, AppWorx, Markit EDM
- **Cloud & DevOps:** AWS (Solutions Architect, SysOps), Azure, Linux, Git/GitHub, JIRA, Agile
- **Automation & Scripting:** PowerShell, Bash, Arduino/ESP programming
- **Testing & QA:** Functional & technical test plan development, CI/CD integration

Work Experience

Associate Application Development Analyst | Genworth Financials - Richmond, VA **July 10th,2023 - Present**

- Lead full-lifecycle design, development, and automation of mission-critical applications supporting Fixed Income Assets Accounting, Commercial Mortgage Loan (CML), and Enterprise Data Management (EDM) processes, resulting in measurable efficiency gains.
- Provide production support for daily and monthly data loads and extraction workflows; proactively identify and resolve process failures to guarantee uninterrupted feeds into the Data Warehouse.
- Architect and execute comprehensive technical and functional test plans—covering unit, integration, and regression testing—to validate new features and minimize production defects.
- Collaborate with on-site and offshore teams in an Agile environment; lead sprint planning, task prioritization, and status tracking through JIRA to deliver projects on time and within scope.
- Innovate ETL orchestration by authoring, configuring, and scheduling AppWorx workflows, reducing manual interventions by 75% and standardizing cross-process operations.

Key Projects:

- **CML Process Owner & PAM JSON Message Generator Developer**
  - Serve as primary IT liaison for Commercial Mortgage Loans data feeds (Midland → PAM by State Street).
  - Oversee & enhance the dynamic message generator; triage and resolve business queries and exceptions.
- **Derivatives Migration & PAM Legacy Message Generator Developer**
  - Architected a next-generation, data-driven message generator for migrating Derivatives workflows from Findur to PAM. Led integrity testing, mapping validation, and performance tuning.

Student Assistant | Office of Residence Life IIT - Chicago, IL **August 22nd,2021 – May 5th,2023**

- Collaborated with Resident Advisors and professional staff to promptly resolve student concerns, coordinate residential events, and optimize operational workflows.

Software Engineer Intern | ITHENA - Richmond, VA **June 30th,2020 – August 10th,2020**

- Worked closely under the guidance of the Product Manager to design and implement robust local software services in C# and JavaScript, ensuring seamless, reliable communication with server-side APIs for smart device monitoring.
- Optimized smart street-lamp communication efficiency by 300% through advanced C# programming techniques and real-time monitoring logic.
- Led front-end development of product web interfaces using HTML, CSS, and JavaScript, significantly enhancing user engagement and overall UX.

Education

Illinois Institute of Technology - Chicago, IL **August 19th,2019 – August 12th,2023**

- Master of **Cybersecurity Engineering** | GPA: 3.6 Awarded: August 12th,2023
- Bachelor of Science in **Computer and Cybersecurity Engineering** | GPA: 3.5 Awarded: August 12th,2023

Relevant Coursework

Application Development | Database Management | Data Structures & Algorithms | Cybersecurity | AI | Machine Learning | Computer Architecture | Embedded Systems | IoT | Network Security | Data Encryption

Certifications

- Palo Alto Networks Certified Cybersecurity Professional
- Front-End Developer by Meta
- AWS Certified Developer & SysOps Administrator
- AWS Certified Solutions Architect & Cloud Practitioner

Leadership Experience

Internal Secretary | IEEE-Eta Kappa Nu, IIT Delta Chapter - Chicago, IL **April 22nd,2022 – May 5th,2023**

- Managed detailed meeting agendas and action-item tracking, while coordinating logistics for professional events, networking mixers, and guest lectures—driving a 30% increase in member engagement and industry-academia collaboration.
- Orchestrated comprehensive travel and accommodation arrangements for board members, internal employees, and event speakers, ensuring seamless execution and elevated participant experience.

Projects

Web Portfolio | Skills: React Native, JS, CSS, HTML, GitHub **August 29th,2022 – July 10th,2023**

- Built a polished web portfolio with React Native, JavaScript, HTML/CSS, and GitHub, highlighting professional experiences, projects, and certifications through an intuitive, responsive interface.
- Leveraged advanced front-end development and UI design skills to create an engaging online presence that effectively showcases skills, achievements, and technical expertise.

Plant Disease AI Classifier | Skills: Computer Vision, Python, A.I. **May 15th,2023 – August 1st,2023**

- Developed a real-time AI system combining thermal imaging, humidity sensors, and a convolutional neural network to accurately classify plant diseases and support sustainable agriculture.
- Enabled early risk detection and actionable irrigation insights by incorporating Vapor Pressure Deficit (VPD) calculations based on integrated environmental data.

ConvoCare | Skills: Python, JS, CSS, React, MySQL **August 28th,2022 – December 8th,2022**

- Engineered a real-time AI-driven plant disease classification system by integrating thermal imaging, humidity sensors, and a convolutional neural network—delivering accurate, sustainable crop health monitoring.
- Enabled early risk detection and irrigation optimization through Vapor Pressure Deficit (VPD) analytics, advancing resilience for farmers, agronomists, and researchers.