Albert Jean

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EDUCATION

The University of Texas at Dallas, Richardson, TX — August 2018 - December 2021
Bachelor of Science in Computer Science — GPA: 4.0/4.0
- Jonsson School Academic Success Scholarship Recipient — January 2019
- Latin Honors: Summa Cum Laude

The University of Texas at Dallas, Richardson, TX — January 2022-Present
Master of Science in Computer Science (Cybersecurity Track) — GPA: 4/0/4.0

Technical Skills

Programming Languages: Java, C/C++, Python, PHP, SQL, TypeScript, HTML/CSS
Technologies / Frameworks: Microsoft Office, Git, Linux, AWS, GCP, React, NodeJS, Apache Spark
Languages: English (fluent), Chinese (conversational)

Personal Projects

IA-32 Binary Code Translator (C):
- Implemented a binary code translator for the Intel architecture which instruments single argument functions and allows for program-level profiling via control flow instruction patching and context switching
- Decoded instructions programmatically to determine length, opcodes, immediate values, and other properties
- Optimized programs with exponential time complexity via function parameter-level memoization
- Applied concepts of dynamic code analysis and virtualization from binary code analysis course

Secure File Protocol (Java):
- Designed a secure protocol specification which allows for file transfers across TCP
- Utilized standard cryptographic algorithms (SHA-256, RSA) for encryption and integrity checks
- Verified the server's identity through an OpenSSL X.509 self-signed certificate
- Defended against replay attacks and active / passive adversaries
- Applied authentication, confidentiality, and integrity concepts from information and network security courses

More projects are listed at albertsjean.github.io

Work Experience

AccessMyResearch: Senior Design Project (January 2021 – May 2021)
- Participated in peer programming under agile development methodologies to create an academic search engine
- Created an AWS Lambda function for proxying search requests from the frontend to the backend
- Hosted middleware application to resolve CORS issues and secured the connection with an SSL certificate
- Connected the frontend Vue application to middleware and backend services, which allowed for keyword searching, author email address lookup, and time filtering

Charles Schwab: Cyber Security Intern (June 2023 – August 2023)
- Fine-tuned the DistilBERT natural language processing model to categorize emails based on text content and achieved an accuracy of 98.29% based on historical email test dataset
- Applied programming and data manipulation skills to label emails, clean data, remove unnecessary duplicates, and extract text content
- Incorporated the text filtering function and NLP model predictions into the pre-existing email data pipeline via Cloud Composer and Dataflow

Extracurricular Activities

UT Dallas Computer Security Group (2021)
- Absorbed knowledge about various security vulnerabilities
- Participated in Capture the Flag competitions and worked on numerous cybersecurity related challenges
- Applied newly gained knowledge in programming habits and personal projects