Dang Kim Minh Nguyen

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EDUCATION

Purdue University **West Lafayette, IN**
Bachelor of Science in Computer Information and Technology August 2023 – May 2026
Relevant Course: Object-Oriented Programming, System Programming, Database, Network Engineering, Cryptography, Information Technology Architecture, Cyber Forensics, Advance Security Coding

SKILLS

Programing: C/C++, Java, Python, Javascript, Kotlin, HTML/CSS
Framework: OpenCV, PySide6, Mediapipe
Database: MySQL, PostgreSQL
Tools & Platform: AWS IAM, AWS Config, Firewall Rules, Identity and Access Management (IAM), Kubernetes
Operationg System: Window, Linux
Data Visualization: PowerBI, Dash

EXPERIENCE

NTT Research Inc. **Sunnyvale, CA**
Data Science Intern June 2024 – August 2024

- Collaborated with cross-functional management teams to integrate data science solutions into the building's energy management and operational framework
- Developed a machine learning (ML) time-series forecasting model using Python to analyze and predict energy consumption trends, achieving 90% accuracy. Enhanced the efficiency and operational effectiveness of Internet of Things (IoT) sensor behavior to optimize energy use.
- Designed and developed interactive data visualization dashboards using Dash for real-time energy insights and reporting.
- Presented data analytics and performance insights weekly to C-level executives (CTO and CEO) to inform strategic decisions.

Syngenta x Purdue **West Lafayette, IN**
Undergraduate Data Science Researcher August 2024 – December 2024

- Developed a product forecasting leveraging Python and machine learning models which improved product forecasting accuracy by 20% and supported data-driven decision-making for various agricultural products.
- Researched predictive analysis, data cleaning, and time series forecasting methods.

American Chemical Safety x Purdue **West Lafayette, IN**
Undergraduate Data Science Researcher . August 2023 – December 2023

- Web-scraped PubChem using the PUG-VIEW API to request information and Python to filter out sentences that do not contain hazard words, create warning messages for the reactant group, then implement an ML model to find the most reactive chemicals to enter into the CSL database.

PROJECTS

Nautilus - ASL Learning App | Python, OpenCV, Mediapipe, Tensorflow, PySide6

- Develop ASL learning lesson plan with interation and engaging function
- Utilize the smartphone camera, using hand motion detection to determine whether the user is performing the sign
- Implement Python using Tensorflow and Mediapipes to train AI Model that checks the user's hand pattern and provides immediate feedback with dection precise up to 90%
- Intergrate Pyside6 to build fully-functional GUI for responsive to user interactions

Enterprise Network Administration

- Configured a pfSense firewall with four distinct zones, enabling mail exchange via a Postfix server and managing spam filtering through SpamAssassin.
- Established internal and external DNS services, utilizing DNS records such as A, MX, and CNAME to handle recursive queries across the network efficiently.
- Set up secure web servers using Apache2 with SSL encryption and implemented a transparent proxy server (Squid) within the DMZ zone for enhanced security and traffic management.
- Deployed an application delivery system with Big-IP LTM, ensuring efficient load balancing and failover support across multiple web servers.

Fruit Classification App | Kotlin, Java, Python, CNN, Numpy, Matplotlib, Scipy, Scikit-learn

- Developed a Kotlin-based fruit classification app using Java Camera2 API for real-time image capture and an XML-based user interface.
- Trained a CNN model with L2 regularization to classify fruit patterns, utilizing Python libraries (Numpy, Matplotlib, Scipy, Scikit-learn). Built a Java server for real-time image classification, enabling seamless result retrieval within the app.

Secure Messaging Application | C, Python, SQL, Node.js, Bash, Encryption

- Established secure connections using SSL/TLS protocols and OpenSSL libraries with AES-256 encryption for confidentiality and RSA-2048 for key exchange.
- Built secure authentication with bcrypt hashing and salting using C for password protection against unauthorized access.
- Created an automated test suite with Python scripting for encryption validation, data checks, and error handling.
- Implemented SQL for encrypted message storage and session tokens, using buffer overflow prevention and memory sanitization for safety and integrity.