

Anthony Pham

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EDUCATION

Master's in Computer Science (Cybersecurity Certificate)

University of Arkansas, Fayetteville, AR

Expected: May 2026

Bachelor of Science in Computer Science (Honors)

Minor in Mathematics

University of Arkansas, Fayetteville, AR | 4.0 GPA | Honors College Fellow | Outstanding Senior

Acquired: May 2024

Relevant Coursework: Software Engineering, Operating Systems, Algorithms, Database Management Systems, Computer Networks, Artificial Intelligence, Information Security, Cryptography, Computer Security, Cybersecurity for Operations Management

EXPERIENCE

Software Development/Data Engineering Intern

Nuqleous Retail Analytics

May 2022 – May 2024

- Expanded the ETL process used by 250+ customers with 10,000+ data points daily by building upon the data loading process using C#/.NET, Python, and Azure Functions, creating two new data connectors
- Developed SQL scripts and stored procedures for SQL Server, Exasol, and Snowflake to automate tedious manual tasks and mitigate room for human error, cumulatively saving hours of work every single week
- Managed daily operations through analysis of SQL queries and monitoring processes through Airflow DAG's
- Maintained effective communication across product teams in a fast-paced agile/scrum environment, ensuring transparency and general awareness
- Worked over 50 bi-weekly on-call weekends, entailing monitoring of system health, updates of system status, and prompt debugging of any system errors
- Collaborated with the customer support team, cumulatively handling 50+ customer tickets with prompt debugging of system-wide code and database analysis

ENGINEERING PROJECTS

Personal Portfolio Website (*phamofanthony.com*)

Spring 2024

- Developed the portfolio in Python using Streamlit, showcasing detailed information about background and credentials as well as video demos of projects
- Host the website through containerizing in Docker and deploying on Kubernetes through Google Cloud

Damage Assessment and Recovery for Critical Database Systems (Undergraduate Thesis)

Spring 2024

- Developed and simulated damage assessment and recovery algorithms that minimize downtime for critical database systems
- Utilized data mining to develop pattern recognition of passable/malicious transactions and integrated user authorization checks to account for false positives
- Analyzed data dependencies between database objects to efficiently segment transaction logs for efficient damage recovery

Nuqleous SLA Analysis Page

Spring 2024

- Integrated a service level agreement (SLA) analysis page into the existing Streamlit application by querying Snowflake to provide prompt analytics on customers completing data loads by their established SLA times allowing the customer success team to maintain awareness of customer satisfaction

Nuqleous Spotlight Status Slack Bot

Spring 2023

- Created a bot in Python that continually runs in an Airflow DAG and uses the Slack API to provide hourly statistics of system health with data pulled live from PostgreSQL and Snowflake
- Added functionality to directly update other Airflow DAG's from the data pipeline to reset tasks and resolve errors simply through reacting to messages from the bot, removing the need to access the Airflow website from a computer while on a VPN
- Saves the operations team from writing updates allows them to work on other projects or enjoy their weekends while on-call

Capstone Matching Web Application

Fall 2023

- Architected a web application using the Django framework and a specialized algorithm in Python with OR-Tools to streamline the Capstone matching process for the University of Arkansas, combining all instructor, sponsor, and student interactions into one hub to save instructors 10+ hours of time per department
- Improved upon previous years' matching satisfaction results by 12% using the new matching algorithm

Food Map Mobile Application

Fall 2022

- Engineered an Android application using Kotlin and NoSQL that creates a social network where users can share local food reviews with useful metrics like review, price point, overall rating, and photos and visually display them on a map with pins
- Updated the Firebase NoSQL database through REST API calls

UARK Campus Navigation Program

Fall 2022

- Designed a campus routing application in C++ that generates the most efficient route between buildings to help users traverse campus via efficient searching and sorting algorithms

Bridge Crossing Simulation

Spring 2022

- Programmed a multi-threaded bridge crossing simulation in C using Pthreads that executed crossings in accordance to set constraints, solidifying understanding of multi-threading concepts like locks and mutexes

TECHNICAL SKILLS

- Front-End Development: Blazor, Telerik, React, HTML/CSS, NPM, Yarn, Streamlit
- Back-End Development: Django, .NET, Node.js, SQL Server, Exasol, Snowflake, PostgreSQL, NoSQL
- Languages: Python, C#, C++, C, Java, Kotlin, JavaScript, SQL
- Tools: Git, Azure, Docker, Kubernetes, Postman, Fiddler Everywhere, Wireshark, Airflow, Visual Studio, DbVisualizer, Netlify, MicroStrategy, Microsoft Office

AWARDS/HONORS

- CyberCorps Scholarship for Service** May 2024 - Present
- Award for high-achieving students amounting to full tuition coverage for graduate school, a \$37,000 annual stipend, and a \$6,000 stipend for professional development
- Outstanding Senior (Computer Science)** May 2024
- Awarded to one student per major each year, symbolizing excellence in academics, research, industry experience, and beyond
- First Ranked Senior Scholar** May 2024
- Awarded to students who graduate with a 4.0 GPA across all undergraduate coursework
- Honors College Fellowship** August 2020 – May 2024
- Achieved the prestigious fellowship after an application process entailing timed essays and an interview, amounting to \$76,000 across four years of undergraduate education at the University of Arkansas
- Governor's Distinguished Scholarship** August 2020 – May 2024
- Granted from the state of Arkansas for having both an ACT score higher than 32 (34) and a GPA above 3.5 (4.321) in high school, amounting to \$40,000 across four years of postsecondary education
- Tau Beta Pi Honor Society** May 2022 – May 2024
- Earned acceptance into the prestigious engineering honor society through placing in the top 1/8th of class and undergoing an initiation process that entailed polishing a board and obtaining signatures of other members and faculty advisors

LEADERSHIP

Vietnamese Student Association at the University of Arkansas

- Co-President: May 2023 – May 2024
 - Led weekly officer meetings and guide productive planning conversations
 - Maintained a broad vision of the organization's operations and ensure adequate pacing with yearly plans
 - Supported all members of the team to ensure they have all the resources they need and aren't overwhelmed or lost
- Internal Vice President: May 2022 – May 2023
 - Developed new connections and grow maintaining relationships between Arkansas VSA and other organizations or people in the campus/NWA community
 - Assisted other executive board members in accomplishing year-long planning and provide aid in their duties whenever needed
 - Projected a key voice in crucial organizational decisions
 - Led the VSA intern meetings, consisting of a group of 13, to instill them the experience and insight into how officer and executive board meetings run and how to plan large events
- Intern: August 2021 – May 2022
 - Shadowed officer meetings to better understand how large-scale events are planned
 - Planned and executed large semesterly events with fellow interns, such as a week-long canned food drive that brought in over 600 cans that were donated to the local food bank

Union of Vietnamese Student Associations South (UVSA South)

- Actively engage as a member of this 501(c)(3) non-profit, non-partisan organization that unites the Vietnamese Student Associations (VSA's) within Arkansas, Texas, and Oklahoma (encompassing 3000+ members) and promotes regional events to focus on leadership development, networking, and service
- Camp Legacy IX Logistics Director: May 2024 – August 2024
 - Coordinated team of 3 committee members to organize the logistics behind a leadership camp that pulled in 100+ attendees, leading weekly meetings to comb through the execution of the event
- Summit XII Logistics Committee: August 2023 – April 2024
 - Cooperated with 4 other committee members to map out the logistics behind a regional leadership conference that historically brings in 400 attendees
- Information Technology Cabinet Staff: July 2023 – July 2024
 - Collaborated closely with other staff members and cabinet director to develop and maintain the UVSA South website and all of its registration portals for events
- Camp Legacy XIII Programming Committee: May 2023 – August 2023
 - Developed bonding activities for the 100+ attendees to create a sense of community and foster closer connections
- Summit XI Logistics Committee: August 2022 – April 2023
 - Cooperated with 4 other committee members to map out the logistics behind this regional leadership conference that historically brings in 400 attendees, mapping out logistics behind transitions, A/V needs, and execution of events