David J. Jarufe Siman

Computer Engineer

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OBJECTIVE

Seeking a full-time job opportunity to aid in the growth, fulfillment, and success of business goals while solving problems, gaining knowledge, and working together with like-minded peers.

EDUCATION

Master of Science in Computer Engineering – Purdue University – West Lafayette, IN *May 2023*

- Cumulative GPA: 3.74 / 4.00
- Area: Computer communications and networks

Bachelor of Science in Computer Engineering – Purdue University – West Lafayette, IN *May 2021*

- Cumulative GPA: 3.48 / 4.00
- Minor: Management

TECHNICAL SKILLS

Programming Languages / Frameworks

- Angular
- TypeScript
- CSS
- SystemVerilog
- MATLAB
- Python
- HTML
- C / C++
- Assembly
- Bash

Relevant Coursework

- Introduction to Computer Security
- Wireless Communications
- Data Structures
- Computer Communication Networks
- Digital System Design and Prototyping
- Python for Data Science
- Software for Embedded Systems
- Microprocessor Systems and Interfacing
- Advanced C Programming

WORK & RESEARCH EXPERIENCE

AT&T – Dallas, TX *June 2022 – Aug. 2022*

Software Engineer Intern

- While employing the agile scrum methodology, partnered with a second intern to enhance and refactor the UI/UX of the Dynamic Charting Tool, a very efficient and detailed data lookup application used within the HR department.
  - This key tool allows a user find information about AT&T's workforce by generating charts, tables, and reports to help understand where AT&T stands and in what direction it should move regarding its workforce.
- Collaborated as the Product Owner with a Scrum Master and two developers in an intern innovation challenge to ideate, program, and patent a novel parking spot finder application that takes advantage of AT&T's core network assets.
- Drove my own career development by preparing and exhibiting 6 demos that showcased my work throughout the internship, by networking and scheduling 1-on-1's with numerous AT&T employees, as well as engaging in eye-opening conversations with AT&T's current CEO and CSO.

Siman Pharmacy – San Pedro Sula, Honduras *June 2021 – Aug. 2021*

Jr. Network Administrator Intern

- Assembled and configured a large scale call center utilizing the open-source software Issabel, founding the connection of 150+ pharmacies around Honduras through Voice over Internet Protocol (VoIP).
- Devised a database application to fetch, organize, and filter hundreds of daily calls streaming through the VoIP server.
- Acquired knowledge regarding Kubernetes and how the Siman Pharmacy integrates it with Docker containers to efficiently orchestrate critical pieces of software needed by their customers.

Computer Vision in Forest Inventory and Analysis ViP – West Lafayette, IN *Aug. 2019 – May 2021*

FNR Computer Programmer, former team leader & co-leader

- Programmed an accurate, long-term strategy to obtain rich tree information below the canopy employing cameras and software suites such as OpenCV and ROS, resulting in a 66x time reduction for individual tree analysis.
- Designed a low-cost monitoring system for plantations, cutting costs of future forest inventory by thousands of dollars.
- Mentored 5 engineers, allowing for a smooth progression of the project throughout the semesters to come.

DESIGN PROJECTS

Vacant Spaces: A guaranteed parking spot for you – Angular (TypeScript, HTML, CSS) *June 2022 – Aug. 2022*

- Ideated and implemented a solution to alleviate the difficulty of finding an available parking space with an easy-to-use mobile application that enables any driver to begin their commute knowing they will be guaranteed a parking spot.
- As the leader and Product Owner of a team of 2 software engineers and a network engineer, demoed our solution to a panel including one of AT&T's Lead Product Managers, achieving various remarkable reviews.

Portfolio Web Application – Angular (TypeScript, HTML, CSS) *June 2021 – Aug. 2021*

- Took advantage of what was learned throughout the undergraduate senior design project by programming a personal web application showcasing all recent design projects in more depth.
- Deployed the functional app utilizing Google's fully-managed hosting service, Firebase Hosting, opening the application to the public on any device.

PChat: A reliable, free-to-use college group chat application – Angular (TypeScript, HTML, CSS) *Dec. 2020 – May 2021*

- Built and launched a web application containing public group chats for a diverse number of classes, clubs, and organizations, to facilitate easier interactions among like-minded peers and be a place for discussion.
- Utilized Google's cloud-hosted database, Firebase Realtime Database, to store and sync all group chat texts and details, making them readily available within an 8 to 15 millisecond delay to any connected user.
- Cooperated extensively with two other computer engineers, successfully communicating and progressing throughout the semester while tackling weekly deadlines until the end project results were reached.

Packet Filtering Firewalls & Spam Filter – Python *Apr. 2021*

- Designed a firewall for Linux machines using iptables packet filtering modules, impeding the threat of 3 different attacks.
- Programmed spam filter recipes using regex instructions, averting 10+ daily junk emails due to their content.

SYN Flood Attack Implementation – Python *Mar. 2021*

- Created and analyzed the results of a benign script built to carry out SYN flood attacks on local Linux machines.
- Gained a deeper grasp of TCP vulnerabilities and denial-of-service (DoS) attacks throughout the use of the program.

Advanced Encryption Standard (AES) – Python *Feb. 2021*

- Developed a script to execute the encryption and decryption sides of the AES algorithm utilizing a 256-bit key size.
- Employed the program on a daily basis by sending and receiving encrypted texts and images between course peers.

Distance Vector Routing – C++ *Nov. 2020*

- Implemented a simplified version of the path vector routing protocol where each router attempted to find the shortest path to all other routers in a distributed manner.
- Verified its functionality by simulating different router behaviors, especially on router failure, when a path is broken and new paths are found to maintain the lowest cost between all connections.

LEADERSHIP, AWARDS & INVOLVEMENT

Leadership

- Eta Kappa Nu (HKN), Electrical and Computer Engineering **Honor Society** *May. 2022 – Present*
- CVFIA Research Team Co-Leader *Aug. 2020 – May 2021*
- Cary Club Senator and **Operations Director** *Aug. 2018 – May 2020*
- CVFIA Research Team Leader *Jan. 2020 – May 2020*

Awards

- Dean's List *June 2018*
- Semester Honors *June 2018, Feb. & July 2020, May 2021*

Involvement

- Purdue Outing Club *Aug. 2021 – Present*
- Hack the Future *Aug. 2021 – May. 2022*
- The Cary Club *Jan. 2018 – May 2020*
- IEEE Computer Society *Jan. 2019 – Dec. 2019*
- Every Boiler Engineer Codes *Jan. 2019 – May 2019*