

Kyle D. Hamilton

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EDUCATION

B.S. Computer Science: San Jose State University, *May 2024*

- GPA: 3.61, Dean's Scholar, Cum Laude Honors recipient

Relevant Coursework: Operating Systems, Computer Networks, Computer Network Management, Information Security, Database Management Systems, Artificial Intelligence, Machine Learning, Server Side Web Programming

SKILLS

Programming Languages: Java, Python, C, PHP, SQL, Haskell, MIPS Assembly

Libraries & Frameworks: JavaFX, Tkinter, Pandas, NumPy, Sklearn, TensorFlow, Keras, Matplotlib, BeautifulSoup, MySQL

Operating Systems & Platforms: Windows, MacOS, Linux, Ubuntu

Tools & Technologies: Microsoft Office, Active Directory, Wireshark, VirtualBox, GNS3, Cisco Packet Tracer, Splunk, BloodHound, Atomic Red Team, Crestron A/V

PROJECT EXPERIENCE

Academic Success Predictor: San Jose State University, *Fall 2023*

- Developed a deep learning tool with a **Tkinter** GUI in **Python** that predicts college student graduation or dropout with 90% accuracy. The tool uses a feedforward neural network trained on 30 features and 5000 students of raw data via **TensorFlow's Keras** API. Project included a LaTeX document and Google Slides presentation deliverable.

Decryptoid: San Jose State University, *Spring 2024*

- Developed an encryption/decryption tool using **PHP** with integrated user authentication, enabling secure text encryption and decryption through three distinct ciphers: Caesar, Vigenère, and XOR. **JavaScript** was utilized to validate user inputs on the client side and a **MySQL** database was integrated to authenticate users to access the tool.

Music Recommender: San Jose State University, *Spring 2024*

- Collaborated on a 4 member team to develop a music recommendation agent in **Python** that incorporates reinforcement learning to produce a list of recommended songs based on the user's choice of song.
 - Spearheaded the back-end development process that utilized a **Sklearn** SVC model that provided the reinforcement learning after each song recommendation.

Hotel Management System: San Jose State University, *Spring 2024*

- Cooperated with 2 others on a **Java** application to manage the operations of a hotel chain. Incorporated a **MySQL** database that interacted with a **JavaFX** front-end to allow hotel employees to manage a hotel location involving rooms, guests, employees, and other hotel locations.
 - Built the foundation for the **MySQL** database that stored the credentials, hotels, rooms, and guests.
 - Performed CRUD operations in **Java** for the application to interact with the database.

Personal Home Lab: Self-hosted, *October 2024 - Present*

- Built a virtualized cybersecurity lab using **Oracle VirtualBox** with **Kali Linux** and **Windows 10** VMs.
 - Configured a Windows Server 2022 Domain Controller, creating and managing **Active Directory** users, OUs, Group Policy Objects, and Security Policies.
 - Simulated real-world attack scenarios against the Active Directory environment by conducting reconnaissance, privilege escalation, and credential attacks using tools such as **BloodHound** and **Atomic Red Team**.
 - Monitored and analyzed attack vectors using **Wireshark** and **Splunk** to evaluate network traffic and event logs.

WORK EXPERIENCE

Camp Director: City of Fremont Recreation Services, *June 2019 - June 2024*

- Camp Lead of Summer camps for children aged 5 - 11
- Supervise campers and organize activities
- Collaborate with fellow counselors to solve problems and help set up/clean up activities

Facility Attendant: City of Fremont Recreation Services, *January 2022 - Present*

- Supervise events at various Fremont community centers
- Ensure that rental guests adhere to facility rules
- Provide audio/visual systems assistance to rental guests

CERTIFICATIONS

- **CompTIA Security+ (SYO-701):** September 2024
- **SJSU Cybersecurity:** May 2024
- **Cisco Certified Network Associate 200-301:** May 2025