

Kevin Shi

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EDUCATION

University of Virginia

Charlottesville, VA

Bachelor of Science in Computer Science, 3.90/4.00 GPA

Aug. 2022 – May 2026

Relevant Coursework: Data Structures and Algorithms, Computer Systems, Software Development, Cybersecurity, Machine Learning, Reinforcement Learning, Computer Vision, Networks, Discrete Mathematics, Linear Algebra

EXPERIENCE

Northrop Grumman

May 2024 – July 2024

Software Engineer Intern

- Designed and implemented a comprehensive menu system in a Red Hat Enterprise Linux environment using C# for entity filtering enhancing operator situational awareness and productivity while reducing error rates by 10%
- Leveraged image preprocessing and OCR algorithms to extract structured data from image-based documents, saving 20+ hours of manual labor and streamlining subsequent data integration and analysis
- Reduced organizational risk by systematically evaluating 200+ vulnerabilities through SonarQube, implementing effective mitigation strategies and determining appropriate risk tolerances
- Led cross-functional meetings with government stakeholders to gather requirements and validate product features

OmnisTMS

June 2023 – Aug. 2023

Software Engineer Intern

- Developed a web application leveraging Sails.js, Socket.IO, and MongoDB, enabling secure authentication and real-time updates of user information, increasing responsiveness and enhancing user experience with the system
- Spearheaded implementation of 5+ features and bug fixes, optimizing user experience and increasing efficiency
- Engaged in daily standups, delivering progress updates and supporting team members with insights

PROJECTS

Campus Safety Reporting Platform | *Django, Bootstrap, PostgreSQL, Amazon S3*

Jan. 2024 – May 2024

- Collaborated with a team to develop a secure, user-friendly platform designed to enhance campus safety by allowing students and staff to report concerns both anonymously and through registered accounts
- Integrated Google accounts as the primary login system using the Google account API and Django libraries, ensuring secure and familiar access for users while maintaining data privacy
- Utilized Amazon S3 for secure, scalable storage of submissions, ensuring reliable data persistence and accessibility
- Implemented core features such as submission creation, tracking, and review, along with administrative controls for managing report statuses and user access

Audio Denoising with Machine Learning | *Python, Scikit-learn, NumPy, Matplotlib*

March 2024 – April 2024

- Implemented dictionary learning and the Fourier Transform to analyze the efficacy of each in denoising audio data
- Processed training and testing data, setting it up to be run through a Dictionary Learning algorithm
- Analyzed results using Mean Squared Error and Peak Signal to Noise Ratio to evaluate the success of each method
- Visualized findings using matplotlib, enhancing understanding of the comparative efficacy of the two methods

Multi-Level Page Table Simulation | *C, POSIX API, Makefile*

March 2024

- Implemented a simulation of multi-level page table lookup and allocation in C, handling physical addresses accessible via pointers
- Developed functionality for translating virtual addresses to physical addresses and allocating pages when necessary, ensuring compatibility with varying user configurable levels of page tables as well as page offset sizes
- Implemented a de-allocation interface, enabling efficient and safe memory management for pages no longer in use

Spotify Enhancement Website | *React, Express, Firebase, Material UI*

June 2023 – July 2023

- Integrated Spotify API leveraging OAuth 2.0 improving user experience by providing a seamless login experience
- Engineered and designed a personalized profile page displaying user profile information, top artists, and top tracks
- Established enhanced privacy features, enabling users to hide profile sections or make the entire profile private

TECHNICAL SKILLS

Languages: Java, C#, Python, C, C++, JavaScript, SQL, HTML/CSS

Tools/Technologies: .NET, React, Angular, Django, Bootstrap, Express, Firebase, MongoDB, Amazon S3, Scikit-learn, NumPy, Matplotlib, Material UI, JUnit, Git, GitHub