Gavin Caulfield

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EDUCATION

University of Delaware, Newark, DE   September 2021 - May 2025

Honors B.S in Computer Science; Cybersecurity; Minor in Dance
Overall GPA: 3.8; Major GPA: 3.9

SKILLS

Languages: Python, Java, TypeScript/JavaScript, C/C++, C#, R, x86, HTML/CSS, SQL, Bash
Software Development and Tools: Agile, Git/Hub/Lab, VR/AR Development, Unity 3D/2D, React, Linux/Unix, Network Management, Wireshark, NetTools, Digital Forensic Analysis, FrontEnd/BackEnd Development, REST API, Visual Studio/Code
Creative Skills: Creative/Report Writing, Final Cut Pro, Adobe Photoshop, Musical Ability, Modern Dance
Soft Skills: Leadership, Teamwork, Communication, Collaborative Creation, Artistic Direction, Analytical Thinking

RELATED EXPERIENCE

Research Assistant

University of Delaware HCI Lab, Newark, DE   June 2023 - October 2025
- Provide essential support to ongoing research projects through project development and management.
- Developed and tested VR/AR-based educational tools using Unity, HoloLens, and C#/.NET
- Designed experimental protocols, conducted data analysis, and co-authored project findings
- Supported RESTful API development and backend logic for research simulations

Computing Promotions Officer

University of Delaware, Newark, DE   October 2023 - May 2025
- Spearhead social media campaign for the Computer and Information Sciences Department Student Community Board
- Work closely with university department heads to communicate and support student needs.
- Organization and management of student-surrounded computer science events.

HenHacks 2025 – Lead Organizer

University of Delaware, Newark, DE   June 2024 - March 2025
- Led creative direction and logistics for HenHacks 2025, a university-wide hackathon with 500+ participants.
- Directed volunteer training, communication, and committee coordination, resulting in smooth execution and high morale.
- Allocated and organized 80+ volunteers throughout the 36-hour event. Prepared for 8 different shifts and waves of helpers.
- Noted as one of the **largest** hackathons on the east coast, garnering participants from 53 different universities.

Associate Command Center Analyst

Berkeley Technology Services, Wilmington, DE   May 2024 - November 2024
- Participated in InfoSec projects involving identity management and intrusion detection
- Monitored and resolved critical network incidents alongside senior engineers
- Participated in firm-wide projects with BTS' Information Security team such as enhancing security for network validation solutions, identity service management, intrusion/virus detection, and more.

Grill Chef and Server

Fishkill Farms, Fishkill, NY   September 2018 - August 2021
- Cooked and served food for hundreds of farm patrons every weekend during the season.
- Prepared, cleaned, and managed many food stations, cleaned tables, and prepared food batches.
- Worked directly with customer service and complaints, served alcoholic beverages, and occasionally translated for coworkers (Spanish and English)

PROJECT EXPERIENCE

GavinCaulfield.com   January 2025 - *Current*
- Personal site and portfolio showcasing **all** full-stack projects and creative works.
- **Tools**: React, Javascript, Typescript, HTML, CSS, GitHub Pages, Domain Management

Computationally Random Choreography   January - March 2025
- Dance meets autonomy in a Turing-test-style experiment. Merges computer science with artistic interpretation.
- Coded a Bash/FFmpeg script to generate randomized dance from original choreography; reinterpreted via performance.
- Explored authorship and emotion in code-driven art, blurring lines between computational randomness and creative intent.
- **Tools**: *Bash, Final Cut Pro, Dance, Logic Pro X, FFmpeg, Python*
- **Awarded "Interdisciplinary Study in Dance Award" at UD Dance Research Symposium**

Colors of Old College   February - May 2025
- Collaborative dance interpretation of archival materials. Bridges storytelling and embodied performance.
- Expanded UD's immersive, multimedia historical exhibition. Communicated archived stories through movement
- **Tools**: *Teamwork, Collaborative Arts, Interdisciplinary Work, Performance Production & Organization*

The Diner   October - December 2024
- A film project integrating dance, emotion, and social commentary.
- A group project set to choreograph and perform movement onto film. I directed, edited, and performed in the piece.
- **Tools**: *Teamwork, Collaborative Arts, Interdisciplinary Work, Final Cut Pro, Video Editing, Creative Writing*
- **Selected for UD Dance's end of year symposium, *Last Chance to Dance***

Embedded Embodied   June 2024 - July 2025
- A tech-driven system to provide virtual mentorship to elementary students behind an avatar-like model
- Includes voice synthesis, motion sync, and database integration
- **Tools**: *C#, Unity3D, Clinical Research, Data Organization and Management*

HoloFlash (*Hackathon Winner*)   March 2024
- A Python Flask server on a Debian VM integrates MongoDB Atlas and Google Cloud services like Vision API and Gemini.
- Accompanied by a React frontend with user authentication, file uploads, and flashcard retrieval. Notably, it features Microsoft HoloLens 2 integration for augmented reality learning experiences. End-to-end product using AI and AR.
- **Tools**: *Python, MongoDB Atlas, Google Cloud (Vision API, Speech-to-Text API, Gemini), React, Microsoft HoloLens 2*
- **Winner of "Best Use of AI in Education" at University of Delaware's Hackathon "HenHacks 2024"**

SpotifyHub   December 2024 - Present
- A full stack self-hosted application extensively leveraging Spotify API to fill holes in the base application.
- Developed over 40 unique tools, integrating over 3 APIs to create an efficient breadth depth music recommendation system.
- Created fully developed, secure E2E REST API with extensive error handling, health checks, and documentation.
- **Tools**: *JS/TSX, CSS, Python backend, (Spotify, LastFM, Gemini) APIs, SQLite, Nodriver, Selenium*

LastFM/Spotify Management   August 2025
- Developed a custom tool using 3rd-party API and logic for playlist pruning.
- Uses Spotify, LastFM, and Musical Analysis APIs to analyze and optimize spotify playlists.
- Engineered RESTful API services with underlying network socket handling and request/response data pipelines
- **Tools**: *Python, Spotify API, LastFM API, Bash, Wireshark, Algorithmic programming*

WebsiteSetup   July 2024
- CLI automation to deploy and manage static sites. Smart dev-tooling project for developers.
- Provides end-to-end development-to-deployment automation within the CLI of a bash-based computer.
- **Tools**: *Python, Bash, Git, React, Node.js, JS/TSX*

Towards Anatomy Education with Generative AI-based Virtual Assistants…   Summer - Fall 2023
- Enhanced anatomical education through a VR-based questionnaire.
- Research and pilot tests showcase a noticeable increase in educational retention and motivation.
- **Tools**: Unity, VR/AR, ChatGPT API/LLMs, Vive Index and Hololens, Azure SDKs, Visual Studio, C#, .NET Framework
- **Won "Honorable Mention" at the AIxVR 2024 Conference**

Finding Nolan   October 2021 - May 2022
- A 40+ minute fictional short film directed, shot, written, and edited by myself. Consists of my freshman floormates.
- **Tools**: *Video Editing, Creative Writing, Leadership, Collaboration, Communication*

iMessage to Spotify Scraper (on GitHub)   Winter 2022/2023
- Scrapes songs within SMS and adds them to a Spotify playlist. Additionally, it uploads every song to a spreadsheet.
- **Tools**: Python, Spotify API, Google Sheets API, Beautiful Soup

AWARDS & RECOGNITIONS

- **(2025) Steven Geracimos Memorial Award** - Recognition of outstanding computer science major who has demonstrated both interest and aptitude for the subject.
- **(2025) Interdisciplinary Study in Dance Award** - Awarded yearly to strongest interdisciplinary research in dance.
- **(2024) Hatem M. Khalil Memorial Award** - Recognition of outstanding achievement in software engineering.
- **(2024) AIxVR 2024 Conference Honorable Mention** - Generative AI in VR Education
- **(2021 - 2025) 8x Dean's List Recipient** - Recognized to UD's Dean's List (GPA 3.8+) for Fall 2021 through Spring 2025