Bob Wilson

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After a career in animation, I'm expanding my skills by studying coding and game development at Michigan State University.

Education

Michigan State University *East Lansing, MI*

B.S. Computer Science, Concentration in Multimedia and Graphics exp. graduation Dec 2027
Minor in Game Design & Development. Michigander Scholar. GPA 3.652

Washtenaw Community College *Ann Arbor, MI*

Computer Science Classes (Python, Java), 4.0 GPA, Dean's List - High Honors, Phi Theta Kappa Honor Society

Macomb Community College *Warren, MI*

Associate of General Studies, 4.0 GPA, summa cum laude, Dean's List. Studied MACA Digital Art & Animation Specialty

Technical Skills

Languages and Libraries: C++ (wxWidgets)**,** Python (Pandas, NumPy, SciPy, SymForce, Matplotlib, JSON, REST API, CSV), C#, Java, UML
Developer Tools: VS Code, CLion, IntelliJ, Unity, Jupyter, Git, GitHub, GitLab, Perforce, Jira, Visual Paradigm, Doxygen, Eclipse, Trello, Jenkins, Windows, Mac, Linux
Certifications: PCEP Certified Entry-Level Python Programmer, Adobe Certified Expert for After Effects, Photoshop, Premiere

Experience

Software Engineering Intern May 2025 – Aug 2025
General Motors *Warren, MI*

- Global Manufacturing Electrical & Software Defined Vehicles (SDV)
- Resolved software bugs and cross-compiled code for embedded hardware testing.
- Identified and fixed memory leaks using Valgrind and uncovered additional issues with Cppcheck.
- Developed tools to extract and process data from various file formats.
- Assisted in troubleshooting TCP/IP networking issues.
- Improved my C++ real-world embedded systems projects using Visual Studio.
- Created Python scripts to automate tasks and improve engineering efficiency.
- Gained hands-on experience with Git version control and collaborative workflows.
- Contributed to Agile workflows through standups, Jira ticket management, and Confluence documentation.

Software Engineering Intern Jan 2025 – Mar 2025
Freight Verify, Real-time visibility platform for complex supply chains *Ann Arbor, MI*

- Worked on development team for Finished Vehicle product used by GM and Ford to track vehicles from assembly to dealerships
- Resolved multiple Java and Python bugs by addressing Jira tickets, ensuring improved functionality and performance
- Developed a solution to improve logging levels for a Spring Boot service running in various Kubernetes development environments

Robotics Software Engineering Intern Feb 2024 – Apr 2024
Skydio, the world leader in autonomous drones (in partnership with *Open Avenues Foundation*) *San Francisco, CA (remote)*

- Developed a dynamics simulation and feedback controller for Skydio's quadrotor drone using Python, NumPy, SciPy, and SymForce.
- Delivered a GitHub repository with Jupyter notebooks, including implementations, derivations, and collaborative contributions.

Projects

Bug Blasting (3D first person shooter game in Unity for MSU class CAS 117 Games and Interactivity) Mar 2025 – Apr 2025

- Game design and development, C# programming, level design, lighting, and animation state machine editing.
- Fixed a number of C# bugs with the tutorial project that was provided in class.

Astro Flipper (2D platformer game in Unity for MSU class CAS 117 Games and Interactivity) Feb 2025 – Mar 2025

- Created custom levels with deadly spikes, C# programming for camera movement and gravity flipping.

Triangle Defender (Retro 2D shooter game in Unity for MSU class CAS 117 Games and Interactivity) Jan 2025 – Feb 2025

- Designed and developed the game, created levels, particle effects, a cinematic, writing, and narration.
- Wrote C# scripts to animate and split enemies, randomize shooting, add cinematic subtitles, and more.

Canadian Experience / Sparty-In-A-Box (C++ project for MSU class CSE 335 Object Oriented Software Design) Nov 2024 – Dec 2024

- Created a 2d animation software with music box simulator with crank, gears, and shafts using C++ and wxWidgets
- Led the team-based sub-project in designing the music box in UML, the only team whose design was approved on the first attempt.
- Won the Best Movie award

Sparty's Boots (C++ game group project for MSU class CSE 335 Object Oriented Software Design) Oct 2024 – Nov 2024

- Team created a video game where the player builds circuits using AND, OR, NOT logic gates
- Created initial class design, wrote several classes in C++ and wxWidgets, refactored teammates' code, and fixed bugs

Previous Career in Animation

Extensive experience as an Animator in Games (EA, PlayStation, Ubisoft), Visual Effects (ILM, Digital Domain, MPC, Tippett Studio), Feature Animation (Pixar, DreamWorks, Cinesite), Automotive (GM), AR/VR (ILMxLAB), and Advertising (Skidmore Studio for clients Ford, Chevy, Mazda, Michelin, Microsoft). Animation portfolio, resume, and awards available at: http://www.bobwilsonanimation.com