Jessica Robbins

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https://jexsaga.github.io/Portfolio/

About

Energetic and creative Master's student with real-world software development experience and a passion for Animation, VFX, and Game Development. Skilled at learning new tools quickly and bringing technical ideas to life through interactive and visual experiences.

Education

Institut Polytechnique de Paris, Palaiseau France. *September 2025 - Present*

- **Interaction, Graphics and Design; Master's in Computer Science**
- Expected graduation: December 2027
- Applicable courses: Interactive 3D Application Development, Fundamentals of Computer Graphics, Computer Animation, Human-Computer Interaction for Mixed Reality, Web Development

College of Science of Engineering, University of Minnesota, Twin Cities USA. GPA: 3.5 *September 2021 - May 2025*

- **Bachelor of Science in Computer Science** with a minor in French
- Honors: Dean's List, 2022-2023 Academic Year
- Applicable courses: Intro: Artificial Intelligence, Programming Graphics and Games, User Interface Design, Computer Graphics 1

Université Paul Valéry, Montpellier France *January 2023 - May 2023*

- Study Abroad - Advanced Track, focused on enhancing language and cultural skills for my French minor

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Experience

Software Engineer - *Dignified Living Home Care, West St. Paul, MN* *August 2024 - Present*

- Primary developer responsible for designing, building, and maintaining internal tools to manage healthcare visit data.
- Developing a web application with .Net, C# and HTML to allow staff to easily track, view, and update visit records in real time, significantly reducing manual entry and improving operational efficiency.
- Integrating RESTful APIs to automate data pipelines transferring data from third party systems to internal databases hosted on Azure SQL.
- Working directly with administrative and care staff to gather requirements, prioritize features, and implement software solutions tailored to real-world healthcare workflows.
- Ensuring compliance with data privacy standards (including HIPAA) when handling sensitive patient and visit information.
- Collaborate in an Agile Scrum environment, participating in sprint planning, reviews, and iterative development to deliver features efficiently.
- Primarily responsible for hands-on coding and troubleshooting, while staying actively involved in architecture discussions and feature planning.

Software Engineer - *AtriCure, Minnetonka, MN* *August 2024 - May 2025*

- Continued work commenced in Engineering Co-op.
- Advanced full-stack software solutions for medical devices on Linux, leveraging C, Python, and JavaScript to enhance functionality and reliability.
- Utilized Azure DevOps for version control, code reviews, and collaborative development workflows.
- Improved and maintained the usability of the graphical user interface in Vue with user feedback.
- Proactively implemented enhancements based on user and engineering feedback, improving workflow efficiency and product usability.

Engineering Co-op - *AtriCure, Minnetonka, MN* *January 2024 - August 2024*

- Developed full stack software solutions using C, Python, and JavaScript for medical devices, demonstrating critical thinking in troubleshooting and optimizing code for reliability.
- Designed and implemented two user interfaces in Vue, significantly improving usability and functionality.
- Managed backend processes, including data handling and communication protocols, troubleshooting issues related to GPS, EEPROM emulation, and CAN bus, illustrating swift learning and problem-solving skills.
- Collaborated effectively within cross-functional teams, demonstrating strong teamwork while proactively contributing to projects across various teams.

Skills

Programming Languages & Frameworks: OpenGL, Blender, Unity, Unreal Engine, Python, C, C++, Java, Web Development, Vue, TypeScript, OCaml, JavaScript, MySQL, Azure SQL, .NET, ASP.NET MVC, REST APIs, Agile, SCRUM, Microsoft DevOps, Azure

Spoken Languages: English, French (Upper Intermediate)

Projects:

Computer Animation Labs - Computer Animation Course *September 2025 - Current*

- OpenGL projects simulating real life phenomena. Some examples include cloth rendering, interactive deformable mesh, water droplet, and collisions.

Video Game - Personal Project *September 2025 - Current*

- In collaboration with another student, this game is a Unity project to get to know the tools for game development. This project has commenced with building a robot in Blender and basic game set up.

Photo Mosaic Generator - Image Analysis Course *November 2025 - Current*

- Project with a classmate to develop and test a photo mosaic generator that uses color matching and edge detection, exploring algorithms from research papers and presenting findings.

HCI for Extended Reality Labs and Project - HCI for XR Course *November 2025 - Current*

- Unity projects with a fellow student to develop VR prototypes, learn XR design principles, and iteratively improve usability through testing.

Ray Tracing - Computer Graphics Course *January 2025 - May 2025*

- An academic solo project in C++ to create from scratch an image renderer using raytracing and text file input.

Hole in the Ground Game - Computer Graphics Course *October 2024*

- An academic solo project using TypeScript and GopherGfx to create an interactive 3D physics video game.

Dancing Ants - Computer Graphics Course *November 2024*

- An academic solo project using GopherGfx to animate ants performing dance moves based on motion capture.

See Jessica’s portfolio for more projects.