Jeremy Noesen

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Education

Master of Engineering, Computer Engineering — Iowa State University, Ames, IA (Jan. 2023 - May 2025)

Bachelor of Science, Computer Engineering — Iowa State University, Ames, IA (Aug. 2019 - May 2023)

Experience

Mid America Water Treatment — Temporary Worker (Sep. 2025 - Present)
- Redesigned and updated website features to enhance usability and customer experience.
- Automated repetitive workflows to reduce manual effort and improve operational efficiency.
- Produced custom graphics and visual assets to support branding and digital communications.

Iowa State University — Teaching Assistant (Jan. 2023 - May 2025)
- Collaborated with faculty to evaluate student work and provide detailed technical feedback.
- Enhanced instructional materials to improve clarity and accessibility for peers.
- Delivered technical instruction and academic support under tight deadlines, ensuring student success.

Prism Charity — Java Plugin Developer (Oct. 2016 - Jan. 2020)
- Designed and implemented Java plugins to expand functionality and enhance user experience.
- Moderated and supported an online community to ensure safety, engagement, and collaboration.
- Increased team productivity by delegating responsibilities and streamlining task management processes.

Projects

homebridge-dyson-bp01 (Sep. 2022 - Present)
- Developed a Node.js plugin to integrate an IR-controlled Dyson fan with Apple HomeKit.
- Implemented real-time device state synchronization to improve reliability and user experience.
- Published the plugin to NPM, making it accessible to a global user base.

MatrixDisplay (Dec. 2021 - Present)
- Designed and built a decorative smart display system using Raspberry Pi and Python.
- Created a web-based interface for intuitive local control and customization.
- Developed a REST API to enable seamless integration with smart home platforms.

Simple Graphics Processor (Jan. 2022 - Feb. 2023)
- Engineered a GPU architecture in VHDL and paired driver software in C with OpenGL support.
- Collaborated with a team to design and implement low-level solutions for complex rendering algorithms.
- Prioritized performance and correctness to reduce compilation cycles and streamline testing.

CyBot (Jan. 2021 - May 2021)
- Programmed an iRobot Roomba in C to operate semi-autonomously with sensor-based navigation.
- Built a visualization interface to map real-time surroundings from raw sensor data.
- Worked in a team to deliver functional robotics solutions within strict deadlines.

Skills

Programming Languages: Java, Python, C, TypeScript, JavaScript, HTML, CSS, VHDL, Verilog, Kotlin

Frameworks & Tools: JetBrains IDEs, VS Code, Git, Docker, Vivado

Soft Skills: Teamwork, Problem-Solving, Adaptability, Leadership, Attention to Detail, Organization

Activities

- Active in marching and concert ensembles (2011–2025), building teamwork, leadership, and discipline through performance and rehearsal.