# Ryan Vance

Electrical Engineering Student | Graduating May 2026
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## Technical Skills

- *Programming Languages:* Python, JavaScript, HTML, React, C/C++, Arduino IDE, Power Automate
- *Software & Tools:* Excel, PLC Programming, VS Code, AutoDesk CAD Softwares, Data Parsing
- *Engineering:* Microcontroller Programming, Circuit Design, Control Systems, PID Control
- *Platforms:* Teensy 4.1, ESP32, Arduino, Teamhood, Confluence, Microsoft Power Platform

## Work Experience

*US Army Corps of Engineers - Civil and Environmental Engineering Intern* *2022 - 2024*

- Coordinated a team of 15 engineers responsible for levee repairs in Clinton following 2023 flood

*PCT Ebeam and Integration - Electrical Engineering Intern* *2024 - 2025*

- In 3 weeks developed a React-based diagnostic tool that transformed troubleshooting word document into an interactive session management app for customer service based on 1,000 JIRA tickets
- Wrote Python scripts with API functionality and data parsing capabilities to generate time reports
- Designed a PLC and HMI program for simple tasks and assisted in troubleshooting for an FAT
- Designed a spreadsheet to parse BOM from Teamhood and create a structure from sheet dependencies
- Create JIRA/Confluence troubleshooting system with flowchart, forms and automations

*John Deere Part Time Student - Electrical Systems* *Sept 2025 - Present*

- Determine feasibility of replacing 17 combine rotary sensing linkage arms to magnetic sensors
- Reduce internal review timeline by 50% within Electrical Systems Team with customizable agent, additionally raising the quality of requirements. System designed for scaling to the enterprise level
- Automating dispositioning of Vision issues using Databricks and copilot studio to learn over time

## Education

*Western Illinois University* *99 credits* *GPA 3.9* *2022 - Present*

- Majoring in electrical engineering with minors in communications, mathematics, and physics
- Microcontroller controlled 3D printed LED Chessboard and chess engine in Mechatronics
- PID controlled Ball Balancer robot programmed for stability and pattern movement using Teensy 4.1
- Group leader in various semester projects including building collapse and Arduino speech detection

*Senior Design - John Deere Predictive Hoist Maintenance System* *August 2025-Present*

- Initiated communication with leadership at Deere leading to a four student project at Harvest Works
- Collect data indicative of upcoming hoist failures, reliably communicate live data wirelessly to SQL database, and alert the maintenance team by displaying hoist events & health on Power BI dashboard
- Scaling to 1,000+ critical hoists in the factory, saving millions yearly and reducing real safety risks

*Scott Community College* *26 credits* *GPA 3.9* *2019 - 2022*

- Communicated with John Deere staff to create model combine part using their design process
- Constructed full sized projects for regional school competitions such as a six-foot trebuchet, and 13-foot cardboard boat, which received first and third place respectively of 20 teams

## Activities

*Boy Scouts of America; Eagle Scout* *LeClaire, IA* *2010 - 2022*

*Academic Club of Engineering President* *Moline, IL* *2022 - Present*

- Restarted the club to help individuals pursue their engineering interests, grown to 20+ active members
- Creating group job shadowing opportunities for all members to gain insight into the workforce
- Organized and led coding workshop for 80 middle school students, promoting engineering week