

# Johnny Depp

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## SUMMARY

Junior Electrical Engineering student at MSOE with internship experience, along with numerous and diverse, hands-on, team-based project experience. Non-traditional student working full-time with part-time academic schedule, then worked 15-20 hours per week with full academic schedule. Skills in control systems, circuit analysis, C, and embedded systems.

## EDUCATION

**B.S. Electrical Engineering** | Milwaukee School of Engineering | GPA: 3.27 | expected May 20XX

## INTERNSHIP EXPERIENCE

**IT Intern** | Krones | May 20XX – August 20XX

- Upgraded 150+ technician laptops, with focus on minimal downtime, for locations throughout Canada, Mexico, and the U.S. by collaborating with managers to identify specific technician hardware and software needs.
- Created real-time company-wide IT asset tracking system by adding all equipment to office and training center blueprints using CAD, including contract dates and malfunction and repair status.
- Tracked employee hiring & termination dates to provide required IT equipment/software & record returned equipment.
- Troubleshoot and resolved IT equipment malfunction, documenting cause and solutions for future use.
- Supported employees and PCs for transition to remote work, including VPN connection and ID verification processes.
- Created detailed SOP for future interns to reference so that the IT department had a smoother and quicker onboarding process for new hires with less supervision.

## ENGINEERING PROJECT EXPERIENCE

**Autonomous Robot Project:** Design, build, and test autonomous robot with lateral movement and uses sensor to search for, find, and push apposing robots out of specific area in campus wide competition.

- Built two power subsystems controlled by SPDT toggle switches to provide power to a 5V regulator connected to both an MSP432 Board and motor driver.
- Programmed code using C to produce pulse width modulation signal to move motor for four wheels asynchronously.
- Tested signal using oscilloscope to identify best frequency and on/off time for optimal speed and torque to move around, and push competitors out, of arena.
- Designed line detection system using 1 light and 1 dark sensor to continuously confirm robot placement inside arena.
- Programmed control system using C to move four wheels in response to triggered sensors: attack opposition or move about arena to find opposition.
- Designed tracking system using infrared transmitter to send intermittent signals to identify apposing robot and send signal to motors to attack.
- Verified IR transmitter on-off time and transmitter signal and pulse frequency by analyzing wave forms using oscilloscope and analog discover kit.
- Fabricated robot chassis and added subsystems: motor, breadboard, microprocessor, and wiring.

**Integrated Circuit Design Project:** Develop, document, and present complex hardware/software system by building a timed corn maze video game providing 3-40 second attempts and user interface using Altera FPGA.

- Created NIOS processor system using platform designer in Quartus to create front end interactive menu, corn maze layout, character, and win/lose screen display on 640x480 VGA monitor.
- Designed timer to continuously update game and character placement.
- Developed front-end and back-end using C in Eclipse based Board Support Package (BSP) for finite state machine to initiate main menu, start and restart corn maze over, and display win/lose states.
- Created a 1Hz clock divider to slow down a 50MHz external clock, a 40 sec countdown and decoder that displayed timer 2 seven segment displays using VHDL in Quartus.
- Connected the NIOS processor to on-board peripherals of the DE-10 Lite board by instantiating the design into a VHDL file using platform designer: for button control of game start, signal control of timer, switch control for character movement and LED indicators for attempts.
- Created testbenches and compilation reports in Quartus and debugging tools in Eclipse to continuously monitor program performance and view and update code errors.
- Compose 18-page technical report: block diagrams, flow charts, VHDL code, C code, compilation reports, and testing.

## TECHNICAL SKILLS

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|-----------|------------------|------------------|
| ▪ C       | ▪ Altera Quartus | ▪ Oscilloscope   |
| ▪ VHDL    | ▪ Multisim       | ▪ MS Word, Excel |
| ▪ AutoCAD | ▪ SAP            | ▪ MATLAB         |

## WORK HISTORY

**Lube Technician** | Woodman's Food Market | 20XX – Present | 15-20 hrs/wk