

# Parikesit Pandu Dewanatha

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## ***Objective***

Highly motivated graduate student seeking a mechanical engineering full-time position for January 2025.

## ***Education***

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### **Graduate:**

**Purdue University**, West Lafayette, IN

**Spring 2023 – Fall 2024**

**Master of Science in Mechanical Engineering**, 3.93/4.00

**Concentration:** Control in Thermal Systems

### **Undergraduate:**

**Purdue University**, West Lafayette, IN

**Fall 2018 - Fall 2022**

**Bachelor of Science in Mechanical Engineering**, 3.80/4.00

**Minor:** Global Engineering Studies

### **Study Abroad: Global Engineering Alliance for Research and Education (GEARE):**

**Karlsruhe Institute of Technology**, Karlsruhe, Germany

**Spring - Summer 2022**

## ***Graduate Involvements***

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**Research:** Dynamic Modeling, Design and Control for Improved Thermal Energy Management

**Graduate Courses:** Linear Systems and Controls, Optimization, Mechatronics, Electric and Hybrid Vehicle, Advanced Engineering Mathematics, Statistical Methods

## ***Technical Skills***

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**Key Strengths:** Data Analysis, System Modelling, System Optimization, Automating Process, Troubleshooting

**Key Software:** MATLAB, Simulink, Python, Arduino, LabView, IQAN, Vector CANoe, C-Programming

## ***Work Experience***

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**ZF Friedrichshafen AG: Autonomous Driving Division, Validation and Test Engineer Co-Op** **Spring 2022**

- Developed an automated Python tool to analyze csv file test results, producing flexible graphical figures, data statistics and a comprehensive report of result. Tool have been used by 4+ engineers to acquire appendices for their test reports.
- Conducted tests on ZF ProAI supercomputer. Validated voltage output and noticed voltage discrepancy between test and production units. Prompted change for the next software release.
- Implemented Python tool to control the ventilation system for ZF ProAI. Added user interface displaying key parameters in real time for testing purposes. Tool was used by NVH engineer to conduct testing with the customer.

**ZF Friedrichshafen AG: CV Division, Systems Engineer Co-Op** **Summer 2020 - Summer 2021**

- Managed and was responsible for 'End of Line' testing of 50+ new EPHS steering system prototypes. Assisted in creating the testing specifications.
- Created a test to validate shaft alignment between pump and motor of the EPHS through IQAN block coding. Implemented in the 'End of Line' test protocol and will be added in future production line.
- Validated EPHS thermal and voltage protection mechanism. Conducted data acquisition and analysis with MATLAB.
- Made automated models in Simulink and MATLAB to display graphical trends of EPHS voltage and temperature derating functions. Model pointed out discrepancies, prompted software adjustment by the supplier.
- Set up a new portable bench test for EPHS testing to allow engineers to conduct test from their desk space. Planned hardware placements and wiring used. Bench test used extensively by system engineers for software validation tests.

## ***Undergraduate Research and Projects***

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**Drop In Bio-Sensor (DIBS) Undergraduate Research Project, Electronics Lead** **Fall 2021**

- Continued development of a light sensor that detects E-Coli in food samples.
- Brainstormed and implemented the application of an SD card on the PCB to record and save test data efficiently.
- Coded on Arduino to improve the ability of sensor to detect illuminance, especially in very dark environments.

**Sheepdog Robot Project: Controls II Project** **Fall 2021**

- Built and programmed a sheepdog robot with a 'herding' behavior that reacts to objects detected by the ultrasonic sensor. Coded the state machine and controller design on LabView. Robot was able to comprehend obstacles with short response time and move with limited noise and vibration. Scored 10/10 on mobility demonstration.