

# Joseph Huang

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## EDUCATION

### Purdue University

*Doctor of Philosophy in Electrical and Computer Engineering*

- Research Focus: Image/Video Coding, Computer Vision, Machine Learning

West Lafayette, IN

Jan. 2026 – Dec. 2029 (expected)

### Purdue University

*Master of Science in Electrical and Computer Engineering*

- Research Focus: Anomaly Detection, Computer Vision, Machine Learning

West Lafayette, IN

Jan. 2025 – Dec. 2025

### Purdue University

*Bachelor of Science in Computer Engineering*

- GPA: 3.86 (Deans List & Semester Honors every semester)

West Lafayette, IN

Aug. 2021 – Dec. 2024

## EXPERIENCE

### Research Assistant (VIPER Lab)

Jan. 2025 – Present

West Lafayette, IN

- Designing a computer vision visual inspection system to detect contamination on surgical tools
- Built a Flask backend for API endpoints, data processing, and model inference
- Developed a responsive React frontend that provides an intuitive and accessible user interface

Jun. 2025 – Aug. 2025

San Jose, CA

### Software Engineer Intern

Jun. 2025 – Aug. 2025

Coherent Corp.

- Developed and trained a custom OCR model achieving >99% accuracy
- Built a LabWindows/CVI GUI that enabled seamless adoption by 20+ non-technical employees

May 2024 – Aug. 2024

Fremont, CA

### Software Engineer Intern

Siemens Digital Industries Software

- Built and deployed Python automation for large-scale SoC design compilations, reducing manual overhead
- Built a UI to visualize compilation analytics for engineers and customers
- Successfully deployed the infrastructure for use on active designs from 4 major semiconductor companies

May 2023 – Dec. 2023

North Liberty, IA

### Software Engineer Intern

Kinze Manufacturing

- Worked in an Agile team to build a full-stack mobile app for controlling high-tech agricultural planters
- Fixed major UI and backend issues across 30+ features, improving stability for final releases
- Performed manual cycle testing prior to release to prevent bugs from reaching production

May 2022 – Dec. 2024

West Lafayette, IN

### Undergraduate Teaching Assistant

Purdue University

- Held office hours and ran labs for multiple classes including C Programming, Python for Data Science and Intro to Artificial Intelligence
- Developed Python auto-grading scripts to streamline the grading process

## PROJECTS

### Resistor Analysis App | Python, Android, Computer Vision

Jan. 2024 – Dec. 2024

- Developed a full-stack Android application to automatically identify resistance of a resistor in an image
- Built a custom segmentation algorithm to isolate resistors in an image
- Achieved 95%+ accuracy in identifying resistance across 4, 5, and 6-band resistors

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Java, SQL (MySQL), JavaScript, HTML/CSS

**Frameworks:** React, Node.js, Flask, Flutter-UI

**Libraries:** PyTorch, TensorFlow, NumPy, Matplotlib, Pandas