# Matthew Wen

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## OBJECTIVE

Engineering student looking for an Internship Position to contribute to an engineering project, and to gain exposure to unfamiliar topics in the technology realm.

## EDUCATION

***Purdue University,*** West Lafayette, IN — August 2018 - Present
Bachelor of Science in Computer Engineering
Expected Graduation Date: May 2022
GPA: 3.93 / 4.0

***Awards:*** Purdue Dean's List and Semester Honors for Fall 2018 and Spring 2019, Mad Hacks 2018 Best Use of Authorize API, Wolfram Alpha Prize, and Top 10 Projects, Purdue 2019 Charles W. Brown ECE Scholarship Winner

***Technical Skills:*** Java, C/C++, Python, Android, JavaScript, HTML, CSS, Nodejs, ESP32, Nordic

## WORK EXPERIENCE

***Software Engineering Intern at Morey Corp*** — May 2019 – August 2019

- Programmed an ESP32 Camera to take a picture and send it to a raspberry pi using Bluetooth rfcomm protocol.
- Used MQTT protocol from Amazon AWS to send command in JSON from website to a raspberry pi that is connected to the internet.
- Created a website for possible end user using Nodejs. The website gets photos from AWS S3 and gets information about each of the photos from AWS DynamoDB.
- Used libcurl library to send HTTP request to AWS S3, so it would become easy to switch between different cloud providers.

## DESIGN PROJECTS

***Personal Webserver Project*** *(Personal Project at www.matthewwen.com)* — December 2019 - Present

- Created a webserver as an API Gateway for current and future projects.
- Designing how the authentication token is calculated using the IAM username, password, and data using OpenSSL SHA 256.
- Planning out different development tools to incorporate into personal server.

***LandP Halftoning Research Team*** *(ECE Vertical Integrated Projects)* — August 2019 - Present

- Using Image Processing libraries from Python to model ink droplets from a printer's nozzle.
- Develop cohesive presentations to present complex ideas and formulas to reach the end goal.
- Measure the reliability of an HP printer based off how well the printer's nozzle aligns its ink droplet onto a test page, as well as the size of a droplet.
- The end goal is to develop a method to combat alignment issue and ink droplets being bigger than expected.

***Strategic Investment*** *(MadHacks 2018)* — November 2018

- Positioned team members based off their abilities.
- Ensured each team member was on task; made sure all team members recognized the end goal.
- Studied the basics of machine learning for mobile applications.

## RELEVANT EXPERIENCE

***Undergraduate Teacher Assistant*** *(Purdue)* — August 2019 – December 2019

- Responsible for hosting office hours for students taking ECE 2001, the fundamental circuit course for Electrical and Computer Engineering students at Purdue.
- Contribute to a team of TA by developing resources that ECE students can take advantage of when preparing for a test or doing homework.
- Communicate to students clearly when explaining complex topics to them.

***Android Basic Development,*** *(Udacity)* — May 2018 – July 2018

- Analyzed the infrastructure of Android and how it operates.
- Examined at different techniques and strategies on how Google tries to reserve memory and save data.
- Experimented with developing Android Applications during my own time.