Max A. Ernst

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Education

University of Michigan 📍 Ann Arbor, MI

B.S.E Computer Science and Engineering, Ross Minor in Business 📅 August 2020 - May 2024

GPA: 3.40 **Expected Graduation:** May 2024

Coursework: Self Driving Cars and Drones: Introduction to Autonomous Electrical Systems, Applied Linear Algebra, Introduction to Computers and Programming, Minds and Machines, Programming and Data Structures, Discrete Math

Purdue University Seminar for Top Engineering Prospects 📍 West Lafayette, IN

Summer Engineering Program 📅 July 2019

Skills

Experienced: C++, Python
Proficient: Matlab, Microsoft Excel, R, HTML, CSS
Novice: Java, Unity Development Engine, Javascript

Experience

GB AIR (Granite Bay High School Aerial Drone Team) 📍 Granite Bay, CA

Project Team Manager 📅 January 2019 - December 2019

- Built and programmed five remote control planes of differing designs and one remote control quadcopter
- GB AIR team manager focusing on education of new members and project management
- Met team goals of achieving maximum flight time of 120 seconds on planes and 300 seconds on drone

MRover (University of Michigan Mars Rover Project Team) 📍 Ann Arbor, MI

Member of Autonomous Division of Software Team 📅 August 2020 - December 2020

- Created a filter to identify and remove outlier data received from visual camera sensor, eliminating 90% of obstacle detection false positives
- Contributed to improve accuracy of virtual testing environment regarding the testing of new perception programs

UM: Autonomy (University of Michigan Autonomous Boat and Drone Project Team) 📍 Ann Arbor, MI

Member of Software Division of Drone Team 📅 September 2021 - Ongoing

- Transitioned

Boys Team Charity 📍 Granite Bay, CA

Member of Charity Organization 📅 2012 - 2020

- Volunteered 3-5 hours a week to tutor at Kids First, an afterschool program for children in abusive familial situations. Personally designed programs to inspire interest in STEM fields.
- Philanthropy activities also focused on supporting homeless organizations such as Cycles 4 Hope and Loaves and Fishes, as well as working with Special Olympics

Projects

Personal Website ⊙ max-ernst/github.io

HTML and CSS Website 📅 September 2021 - Ongoing

- Website created to self-teach HTML and CSS, as well as to create a means to display past projects in an appealing way

Image Adjustment ⊙ maxernst/p2-cv.git

C++ Image Adjustment Algorithm Using Computer Vision and Seam Carving 📅 September 2021

- Object aware computer vision determines seams of pixels deemed least necessary to retain important objects in image, and then sequentially removes these seams
- Capable of changing the dimensions of an image without cropping the edges or distorting image

Facial Tracker

Python Active Camera Facial Tracker and Identifier 📅 July 2020 - September 2020