

Brayton Larson

Online Portfolio: BraytonLarson.com

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EDUCATION

Southern Illinois University Edwardsville

Bachelor of Science in Mechatronics and Robotics Engineering
Minor: Computer Engineering, Mathematics

Edwardsville, IL
Expected: May 2022

ENGINEERING EXPERIENCE

Illinois Department of Transportation - Engineering Intern

- Learned from engineers about project management and interpreting plans
- Checked engineering bridge plans for accuracy
- Surveyed and staked for bridge construction

Summer '20
Metropolis, IL
Reference: Garrik Piche
(618) 841-7605

Cardinal Surveying and Mapping - Surveyor and Drafter

- Aerial drone surveying and processing with point cloud software
- 1.5+ years of AutoCAD and surveying experience
- Wrote JavaScript software using Google Maps API for GIS surveying

Summer '18 - Fall '19
St. Charles, MO
Reference: Will Clark
(636) 922-1001

Autonomous Aerial Drone Design - SIUE Research Assistant (see portfolio)

- Designed an indoor quadcopter capable of computer vision
- Developed with ROS for SLAM localization in GPS starved environments
- Studied control theory, quadcopter kinematics, Kalman filters, and PID

Spring '19 - Fall '19
Edwardsville, IL
Reference: Nima Lotfi
(618) 650-5189

Cougar Rockets Design Team - Argonia Cup Competition (see portfolio)

- Designed deployable mechanisms for a rocket tube launched UAV
- Assisted in design of autonomous flight systems for the UAV

Fall '19 - Present
Edwardsville, IL

Cougar Baja SAE Design Team

- Worked in the metal machine shop fabricating steel and aluminum parts
- Designed and wired the vehicle electronics system

Fall '17 - Spring '19
Edwardsville, IL

Bayer Alka-Rockets Independent Student Design Team (see portfolio)

- Created a micro flight computer for data logging and parachute deployment
- Designed rocket simulations with Alka Seltzer and water as propellant

Fall '19
Edwardsville, IL

First Robotics Competition (FRC) - Raven Robotics

- Vice President and leader of design teams
- Designed rope climbing and ball shooting mechanisms

2014 - 2017
St. Charles, MO

OTHER WORK EXPERIENCE

SIUE Housing - Residence Hall Desk Manager

2019-2020 | Clerical Worker, Student Resource
Reference Askya Quinn: (618) 650-4625

Adrenaline Zone & Demo Ball

2018 | Referee, Server, Dishwasher

Qdoba Mexican Eats

Summer 2017 | Line Cook, Register, Dishwasher

Wedding Videographer | 2015-2017

TECHNICAL PROFICIENCIES

Robotics ROS, Arduino, RasPi, FPGAs, Pixhawk

Mech. Design SolidWorks, AutoCAD, Fusion360

Elec. Design KiCad, SPICE, MATLAB

Programming Languages C++, Java, Python

Adobe Illustrator, Premiere Pro, Photoshop

OS Ubuntu, Debian, Windows, OSX

Microsoft Office Word, Excel, PowerPoint