

Alan Papalia

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EDUCATION

Massachusetts Institute of Technology

PhD Robotics, Advisor: John Leonard

Cambridge, MA

2019–2024 (est)

University of Illinois at Urbana-Champaign

BS Mechanical Engineering; Focus: Computer Science

Urbana, IL

2015–2019

EXPERIENCE

Massachusetts Institute of Technology

Graduate Research Assistant

Cambridge, MA

Fall 2019 - Current

- Developed algorithms for path-planning and localization of multi-robot systems
- Design of low-cost robot swarm for distributed mapping

Oregon State University

Undergraduate Robotics Researcher

Corvallis, OR

Summer 2018

- Implemented object pose-tracking systems for robotic grasping experiments
- Developed library for automated data collection from RGB-D cameras

University of Illinois

Undergraduate Researcher

Urbana, IL

2016–2018

- Developed MEAN stack web application for laser cutter motion planning services
- Presented cloud machining application to DOD, DMDII, and Fortune 100 partners

Seurat Technologies

Mechanical Engineering Intern

Wilmington, MA

Summer 2017

- Designed and assembled system wide cooling systems for industrial 3D printer prototype
- Performed thermal and fluid dynamic analyses to ensure system cooling parameters were met

PROJECTS

UIUC Formula SAE

Team Captain

Urbana, IL

2015–2019

- Led internal operations and system architecture for top 5 team in USA
- Orchestrated system-level design of \$200,000+ Formula SAE vehicle
- Applied classical laminate theory in structural properties MATLAB tool, resulting in under 7% error
- Performed redesign of composite monocoque chassis with result of 4.6 lb savings on 40 lb design
- Applied structural finite element analysis to validate wear cycle performance of suspension components

SKILLS

- **Prototyping:** Welding, Milling, Lathe, 3D Printing
- **Design:** CAD, FEA, Testing, Topology Optimization
- **Programming:** C++, Python, CMake, MATLAB
- **Robotics:** ROS, OpenCV, CUDA

SCHOLARSHIPS AND AWARDS

- Eagle Scout
- Illinois Engineering Achievement Scholar
- GM Society of Automotive Engineers Award