# KEVIN PALISOC

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**PORTFOLIO:** kevinpalisoc.com

## EDUCATION

**Massachusetts Institute of Technology** *Class of 2018*
*B.S. in Mechanical Engineering with Conc. in Product Development (Course 2-A)*

**Select Coursework:** Product Engineering, Design and Manufacturing, Robotics, Engineering Leadership, Statics and Materials, Dynamics, Thermal-Fluids, Measurement and Instrumentation, Applied Electronics, Numerical Computation, Japanese 4

## PROJECTS

**Coordinate**
*(Search and Rescue)*
*Product Design Engineer*
*Fall '17 - Senior Capstone*

- Delivered alpha prototype of handheld GPS system of 10 total devices (3 unique) from concept to live demo in 6 weeks, after user testing and rapid prototyping to balance function, appearance, and manufacturability;
- Drove electronics integration and plastic parts design: delivered 3 iterations of battery compartments for AAs and 18650s, designed for buttons, screen, PCBs, antennas, interfaced with EE team on design trade-offs;
- Implemented design for waterproofing through custom gaskets and liquid adhesives;
- Supported manufacturing: created toolpaths for CNC milling in HSMWorks and rubber molding processes;
- Presented on behalf of 18 person team at product launch to over 250,000 online viewers and 1100 live (video)

**Aquadio**
*Co-Founder & Team Lead*
*Spring '18*

- Led and grew a team of 12 engineers to develop swimming tech that empowers coaching communication;
- Aligned team, started from zero direction and quickly mobilized multi-disciplinary team around concrete goals;
- Supported all mechanical aspects: industrial design, waterproofing, pin charging, bone conduction acoustics

**Assistive Robot Arm**
*Mechanical Design*

- Delivered serial elastic actuated robot arm in 50% of budget, designed to assist hemiplegic patients;
- Owned design of arm linkage: aluminum structure, thrust and ball bearing joints, and belt power transmission

## INDUSTRY

**Aperia Technologies**
*Mechanical Engineer*
*Summer '17 / Current*

- Investigating existing design issues to reduce cost and improve yield for an automatic tire inflator, driving to production through EVT, DVT, PVT, interfacing with CMs on FAI and in-line inspection changes;
- Owned end to end design of a mobile plug-and-play prototyping bench: integrated pneumatic regulators and sensors (0-200 psi), air tank (10 gal.), UPS for 2 hr. battery life (300 Wh), 110V AC to DC power, storage drawers

**MIT Soft Robotics Lab**
*Researcher | Jan '18*

- Drove design iteration of a rubber robot arm through large deformation stress analysis in Solidworks FEA;
- Designed for lost-wax casting and rubber molding, interfaced with prototyping vendors

**Vecna**
*MechE Intern | Winter '17*

- Proved concept and validated failure mode cycle lifespan of a novel hydraulic actuator (1,200 psi) through implementation of a test rig for a DARPA funded robot arm project

**Draper**
*MechE Intern | Summer '16*

- Owned and delivered chassis structure and electronics mounting for a retrofit autonomous mobility scooter;
- Designed for manufacturing and created engineering drawings of 15+ mounts and parts

## LEADERSHIP

**MIT Phi Kappa Theta** *President (Ex- VP, Treasurer)* Spearheaded growth: increased brother residency from 83% to 94%; drove $70,000 in renovations in 1 year and gathered funding (75% grants); increased summer tenancy income by 22% ($11,000) in 1 year

**MakeMIT (TechX)** *Organizer* Coordinated hardware hackathon; individually secured $12,000 worth of corporate funding and materials

**FIRST Robotics 6112** *Team Lead* Achieved first place in state and led engineering and business efforts for a competitive robotics team

## TECHNICAL SKILLS

**CAD & CAM** | Solidworks w/ Simulation (FEA), GD&T, DFM/A, HSMWorks, MasterCAM, Tooling Design, Rendering, Arena, Vault

**Manufacturing** | Injection Molding, CNC Machining, Lathe, Mill, 3D Printing, Rubber Molding, Investment Casting

**Programming & Electronics** | MATLAB, HTML & CSS, Arduino & Breadboarding, Oscilloscope