KEVIN PALISOC

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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

ENGINEERING PROJECTS

Coordinate
(Search and Rescue)
Product Design
Fall 2017

- ❏ Delivered integrated form factor prototype of handheld GPS system of 10 total devices (3 unique devices) within 6 weeks, driven by rounds of user testing and rapid prototyping of 3 iterations of mechanical enclosures;
- ❏ Drove electronics integration: delivered 3 iterations of battery packs and compartments for AAs and 18650s, designed button and screen interfaces, interfaced with hardware team on design trade-offs;
- ❏ Implemented design for waterproofing for two unique devices through custom gaskets and liquid adhesives;
- ❏ Supported manufacturing: created toolpaths for CNC milling in HSMWorks and rubber molding processes;
- ❏ Presented on behalf of team at product launch to over 250,000 unique viewers and 1100 live

Aquadio
Co-Founder & Team Lead
Spring 2018

- ❏ Led a team of 12 engineers to develop swimming technology that empowers coaching communication
- ❏ Delivered integrated form factor prototype after 5 design iterations within schedule and 80% of budget;
- ❏ Designed magnetic charging interface and waterproofing, supported all other mechanical aspects

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 EXPERIENCE

Aperia Technologies
MechE Intern
Summer 2017

- ❏ Owned end to end pneumatic, electrical, and mechanical design of a mobile plug-and-play prototyping bench;
- ❏ Integrated pneumatic regulators and sensors (0-200 psi), air storage (10 gal.), UPS for uninterruptible 2 hour battery life (300 Wh), 110V AC to DC power, storage drawers;
- ❏ Held 5 design reviews with multiple senior engineers;

Vecna
MechE Intern
Winter 2017

- ❏ 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;
- ❏ Repaired and validated performance through failure mode cycle testing of a lifting robot

Draper
MechE Intern
Summer 2016

- ❏ 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;
- ❏ Researched path planning algorithms (RRT, A*, POMDP, Dijkstra) to investigate efficiency and safety

LEADERSHIP & ACTIVITIES

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), HSMWorks, MasterCAM, Tooling Design, Rendering

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

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