

Nick Brennan

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OBJECTIVE: A mechanical design engineer with 7+ years of product development experience interested in developing electronic and software design skills and seeking multidisciplinary opportunities

PROFESSIONAL EXPERIENCE

Mechanical Engineer & Business Developer | [NK Labs](#) | Cambridge, MA | June 2017 – Present

Mechanical Engineering

- Designed custom parts in SolidWorks for a wide range of applications, industries, and client companies
 - DFM: Multi-Axis Machining, Water Jet, MIG / TIG Welding, Rapid Prototyping, Injection Molding, etc.
- Drafted detailed drawings, interfaced with manufacturers, implemented GD&T practices when appropriate
- Led project to design, build, and test smart camera vision system for agricultural environment; passed IP65 test
- Created automated 3-axis dark box test rig to assess light-sensitive electronics; wrote MATLAB control software
- Redesigned custom high-vacuum chamber for muon-catalyzed fusion physics experiment with focus on ease-of-assembly, particle permeability, vacuum compliance, wire routing, and existing geometric constraints
- Worked on-site at Paul Scherrer Institute particle accelerator, various client labs, demos, and test sites
- Coordinated and collaborated with various clients, manufacturers, vendors, testing facilities, etc.

Business Development, Marketing, & Recruitment

- Managed project leads; primary point of contact for potential clients; drafted project proposals and grant applications
 - Led interview process for co-op and full-time hires: placed job postings, filtered resumes, ran phone screens, etc.
 - Overhauled and maintained company website, improved SEO, created ads, and increased monthly traffic by >3X
 - Hosted company booths at US Dept. of Energy ARPA-E Summit and BIOMEDEVICE Expo
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Advanced Systems Mechanical Engineering Co-op | [Boston Engineering](#) | Waltham, MA | Jan – June 2016

- Designed complex parts and assemblies for robotic systems in PTC Creo and maintained in Windchill PDM
 - Executed effective design strategies for static and dynamic sealing and preferred CG and CB of marine components
 - Learned and applied basics of circuitry to assemble functional electrical prototype systems
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Mechanical Engineering Co-op | [Farm Product Development](#) | Hollis, NH | Jan – June 2015

- Engaged in design projects for clients across the biomedical industry from brainstorming to full-scale prototypes
 - Obtained skills for surface modeling within SolidWorks and earned Advanced Surfacing certification
 - Performed FEA using ANSYS Workbench and SolidWorks Simulation to determine necessary part geometry
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Research & Development Co-op | [LeMaitre Vascular](#) | Burlington, MA | Jan – June 2014

- Used SolidWorks to design, model, and produce drawings of parts and fixtures for R&D and Production use
 - Conducted device and component testing on samples across many of company's product lines
 - Made regular use of laboratory equipment such as Instron Tester, Vision System, and burst pressure system
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TECHNICAL SKILLS

Applications: SolidWorks CSWP | PTC Creo / Windchill | Onshape | ANSYS | Asana | Trello | Google Ads / Analytics

Fabrication: Mill | Lathe | 3D Printers (SLA, FDM) | OMAX Water Jet | Laser Cutter | DFM | Woodworking | Soldering

Programming: MATLAB | Git | Linux (Ubuntu) | Basic HTML / CSS / Bootstrap | Basic Python

Testing: Oscilloscope | Instron Material Tester | Multimeter | Ingress Protection | High-Vacuum

EDUCATION

B.S. in Mechanical Engineering, Minor in Biomechanical Eng. | [Northeastern University](#) | Boston, MA | May 2017

Honors: Magna Cum Laude | University Honors Program | Dean's List | National Hispanic Recognition Program Scholar

Senior Capstone Design Project: Automated Control System to Map Cartilage Material Properties - Team Lead

INDUSTRIES

Robotics & Automation | Consumer Electronics | Biomedical | Optics | Cryogenics | Aerospace | Scientific Instrumentation

BACKGROUND & INTERESTS

Music | Travel | Bike Commuting | Hiking | Snowboarding | Pizza