Nick Brennan

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

PROFESSIONAL EXPERIENCE

Mechanical Engineer & Business Developer | NK Labs | Cambridge, MA | June 2017 – Present

Mechanical Engineering
- Worked through full design process: system architecture, detail design, FEA, fabrication, assembly, and testing
- 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 production drawings, interfaced with machinists, implemented GD&T practices when appropriate
- Specified part finishes such as anodizing, painting, coatings, and surface finish as needed
- Integrated with electrical design to determine PCB mechanical layout, connectors, clearances, etc.
- Led project to fully design, build, and test smart camera vision system for industrial environment; passed IP65 test
- Created automated 3-axis dark box test rig to assess light-sensitive electronics; wrote MATLAB control software
- Redesigned and refitted high-vacuum chamber for muon-catalyzed fusion physics experiment for ease-of-assembly, particle permeability, vacuum compliance, wire routing, and existing geometric constraints
- 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

Advanced Systems Mechanical Engineering Co-op | Boston Engineering | Waltham, MA | Jan – June 2016
- Created complex parts and assemblies for AUV and robotic systems in PTC Creo and maintained in Windchill PDM
- Designed static and dynamic seals, housings, and identified preferred CG and CB of marine components
- Learned and applied basics of circuitry to assemble functional electrical prototype systems

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

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 surgical product lines
- Made regular use of laboratory equipment such as Instron Tester, Vision System, and burst pressure system

TECHNICAL SKILLS

Applications: SolidWorks CSWP | PTC Creo / Windchill | Onshape | ANSYS | Asana | Google Ads / Analytics
Fabrication: Mill | Lathe | 3D Printers (SLA, FDM) | Water Jet Cutter | Laser Cutter | DFM | Woodworking | Soldering
Programming: MATLAB | Git | Linux (Ubuntu) | HTML / CSS (Basic) | Python (Basic)
Testing: Instron Material Tester | Multimeter | Oscilloscope | Ingress Protection | High-Vacuum
Languages: English (native) | Spanish (limited working proficiency)

EDUCATION

B.S. in Mechanical Engineering, Minor in Biomechanical Eng. | Northeastern University | Boston, MA | May 2017
Honors: Graduated *magna cum laude* | University Honors Program | Dean's List | Nat'l Hispanic Recognition Program
Senior Capstone Design Project: Automated Control System to Map Cartilage Material Properties | **Team Lead**

INDUSTRIES

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