Eugene Ng

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EXPERIENCE

Pratt & Whitney Feb 2017 – Present

Principal Engineer, Manufacturing Engineering & Operations

- Oversaw procurement of hundreds of capital equipment projects totaling more than $100M per year
- Wrote technical specifications, negotiated commercial and legal terms and conditions, and validated/tested material handling automation equipment for machining and inspection processes in new Asheville site
- Converted capital equipment Access database to SQL Server with AgilePoint front-end

Presque Labs LLC Jul 2015 – Present

Co-Founder

- HeroX NextGen Cart Design Challenge winner for airport material transport (AMTC) concept to track and transport secured goods within an airport
  - Routed electrical circuit schematic in KiCad and prototyped and fabricated PCB
  - Developed user interface for cart and linked IoT sensors to SQL database using Python
- Maintained and provided site reliability engineering for company website and internal applications, including Docker, Jupyter, Nginx, Nextcloud, and Wordpress

EDUCATION

University of Connecticut May 2019 – Dec 2020

M. Eng, Electrical Engineering

Cornell University

M. Eng, Mechanical Engineering Jan 2016 – Jan 2017

B.S., Mechanical Engineering Aug 2012 – Jan 2016

Minors: English

PROJECTS

Nonlinear Optimal Control of the COVID-19 Pandemic in Connecticut

University of Connecticut

- Modeled and formulated a nonlinear, predictive closed-loop feedback controller to minimize infected population
- Simulated mathematical model in Python using the GEKKO optimization suite

Arachnabot: Spider-Inspired Robot

Collective Embodied Intelligence Lab, Cornell University

- Analyzed, modeled, and simulated a to-scale jumping robot with spider-inspired joints in MATLAB
- Directed micro-fabrication using FDM and SLA 3D printing methods

Cornell Concrete Canoe

Team Lead, Cornell University

- Coordinated and oversaw 6 subteams (aesthetics, analysis, business, mold, mix, and paddling) and 34 persons
- Introduced novel moisture sensors and concrete curing control
- Eliminated shrinkage cracking while increasing tensile and compressive strength by 62% and 35%

SKILLS

ANSYS, C#, CSS, Docker, HTML, JavaScript, KiCad, LaTeX, MATLAB, Microsoft Access, Nginx, Python, SolidWorks, Visual Basic for Applications (VBA), Structured Query Language (SQL), Wordpress