

# Eugene Ng

ngyeugene@gmail.com | (860) 726-6143 | <https://eugene.ng/>

## EXPERIENCE

### Pratt & Whitney

Feb 2022 – Present

#### Senior Manager, Manufacturing Engineering & Operations

- Developed and maintained capital spend models to support business forecasting and budgeting processes
- Analyzed financial data to identify trends and provide insights into manufacturing and operations performance
- Led team of developers to design and program the largest (to-date) AgilePoint application at RTX – an Integrated Capital System with over 100 weekly active users
- Modernized and established new procurement workflows in AgilePoint and helped reduce time to PO by more than 60 days

#### Principal Engineer, Manufacturing Engineering & Operations

Feb 2017 – Feb 2022

- Oversaw procurement of hundreds of capital equipment projects totaling more than \$100M per year
  - Wrote technical specifications identifying critical processes and guiding design concepts for external vendors
  - Negotiated commercial (pricing, payment structure) and legal terms and conditions to reduce cost and risk
  - Validated and led acceptance tests for all projects, including material handling automation equipment, machining and inspection systems, and CNC and welding equipment, etc.
  - Provided EAR and ITAR classifications for export of sensitive technical data
- Converted capital equipment Access database to SQL Server with AgilePoint front-end
- Established new quote approval operations workflow in Sharepoint and decreased process time by 50%

### Presque Labs LLC

Jul 2015

#### 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
- Generated concepts for Revocube (a 3D puzzle game) and programmed game in Unity with C#
- Built and programmed Context, a text message analytics app, in Android Studio with Java
- Full stack programming with Flask, Django, and MongoDB for Waddle, an events app
  - Site reliability engineering for public website and internally hosted web apps, including Jupyter and Nextcloud

## EDUCATION

### University of Connecticut

M. Eng, Electrical Engineering

May 2019 – Dec 2020

### 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

- Created a modified SEIR model of COVID-19 spread in Connecticut, and formulated a discrete, nonlinear, predictive, closed-loop feedback controller to minimize the number of infected
- Simulated mathematical model in Python using the GEKKO optimization suite

### Arachnobot: Spider-Inspired Robot

Collective Embodied Intelligence Lab, Cornell University

- Analyzed, modeled, and simulated a to-scale jumping robot with spider-inspired joints in MATLAB, using a differential algebraic equation (DAE) method
- Directed micro-fabrication using FDM and SLA 3D printing methods

## **SKILLS**

ANSYS, C#, CSS, Export Administration Regulations (EAR), Docker, HTML, International Traffic In Arms Regulations (ITAR), JavaScript, KiCad, LaTeX, MATLAB, Microsoft Access, Nginx, Python, SolidWorks, Visual Basic for Applications (VBA), Structured Query Language (SQL), Wordpress