

WORK EXPERIENCE**Amazon.com****New York, NY***Manager - Software Development, II → III*

(III) October 2023 – Present

Supply Chain Optimizations Technologies, Forward Looking Inventory Planning

(II) April 2022 – October 2023

- Lead team of 10+ engineers to develop and maintain systems to make long-lead buying decisions for global supply chain
- Owner of 6 services on native AWS using Java/Python/Typescript across 4 business domains and 3 functional areas (workflow orchestration, computation, user interaction) which processed \$13+ Billion USD in Purchase Orders in 2023
- Created/executed multi-year, cross-functional strategies to leverage common software architectures to unify/improve business cases; led design discussions, created roadmaps, oversaw efforts across 6+ engineering, science, business teams
- Fulfilled urgent global business needs via 24/7 ops support; launched tech improvements to reduce support by 30%
- Grew team from 3 to 11 members; promoted 3 engineers and converted 2 interns to full-time; mentor to 2 outside devs
- Designed and executed away team resource engagement model for long-term projects across two orgs

Software Development Engineer II, Supply Chain Optimization Technologies

July 2019 – April 2022

- Designed, implemented, launched, tested, and maintained systems to make long-lead buying decisions
- Worked with scientists to design, implement, productionize and scale complex supply chain modeling systems with linear and dynamic programming
- Developed, executed, improved maintenance processes for systems which processed 2k+ Transactions Per Second (TPS)
- Developed and launched software systems leveraging AWS technologies; created infrastructure-as-code, business logic, and auditing/monitoring systems; supported/resolved operational issues through 24/7 on-call support
- Lead development on several cross-functional projects; led design, timeline, execution, launch across engineering team
- Top code contributor and operational issue resolver on team; mentor to three junior engineers and one intern

Space Exploration Technologies Corporation (SpaceX)**Vandenberg AFB, CA & Cape Canaveral AFS, FL***Launch Engineer II, Launch Operations Development*

May 2018 – June 2019

- Launch Vehicle Controller for T-0 countdown ops; sole engineer responsible for vehicle health, system verification; worked under tight timelines and solved pressing mechanical, electrical, and propulsion system issues
- Developed automation software for launch day operations, launch pad activation/testing, pre-launch vehicle integration, post-landing recovery/refurbishment at all three launch sites; was primary owner of automation at Vandenberg SLC-4E
- Owned all pre-launch integration automation; reduced duration of propulsion system checkouts of Falcon 9 booster by 75% by developing automated checkouts, eliminating all manual actions and increasing reliability and safety

Launch Engineer II, Vehicle and Payload Integration

June 2015 – May 2018

- Owned all launch site avionics flight hardware, ground support equipment, software, and processes of Falcon 9 launch vehicle and payload interfaces for over 40 launches and 16 landings
- Launch Vehicle Controller on console for systems-level launch integration, test-fire, and landing operations
- Identified/solved critical electrical, software, mechanical issues of systems to ensure nominal deployment of satellites
- Worked with payload customers to build and verify vehicle-to-payload electrical and deployment interfaces for Iridium-NEXT constellation, Starlink, and Formosat-5 missions
- Created automation scripts for final checkout, launch setup, analysis of nation's first Autonomous Flight Safety System

The Boeing Company**Mukilteo, WA***Intern – Student Engineer, Scripted Process Engineering*

May – August 2014

- Developed software for automation of manufacturing design for Boeing 787 and 777X composite structural components
- Created computational geometry algorithms to optimize composite assembly, reducing engineering involvement
- Designed and implemented automated geometry transition process from CATIA to ply-data accurate within 0.001 in.

General Robotics, Automation, Sensing and Perception Laboratory**Philadelphia, PA***Rachleff Scholar/Undergraduate Researcher*

May 2013 – May 2015

- Worked with 3D printing to rapidly prototype electronics for small-scale robotics
- Developed script to generate 3D printing file (G-code) for printed circuit board in under one second
- Investigated control problem for N-micro-robots in viscous fluid via magnetic fields

EDUCATION**University of Pennsylvania, School of Engineering and Applied Science****Philadelphia, PA**Bachelor of Science in Engineering, magna cum laude | *Cumulative GPA: 3.73/4.00*

Graduated May 2015

Major: Mechanical Engineering and Applied Mechanics | Minor: Computer Science

Teaching Assistant in Intro to Computer Science (CIS110; 2013-2015), Graduate Control Systems (MEAM535; 2015)

TECHNICAL SKILLS

Java • C++ • C • AWS (S3, DynamoDB, Lambda, Redshift, Athena, ECS, EC2) • Software Infrastructure • Project Management • Data Pipelines • SolidWorks • MATLAB • DAQ Systems • LabVIEW • PHP • CSS • HTML • Python • Git • SVN • OpenSCAD • 3D Printing • G-Code • Microprocessors • COMSOL • CATIA • Microsoft Excel, Word