

Daniel Card

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Experience

Northrop Grumman Corporation

Energetic Composite Manufacturing Engineer

Clearfield, UT

June 2021 - Current

- Responsible for maintaining the Navy's multi-billion dollar contract of manufacturing the Trident II D5 Ballistic Missile, entailing being on-call 24/7 and to support on-site operations throughout the weekend and/or nights
- Lead engineer to design/analyze/simulate assembly tooling for multi-billion dollar Next Generation Interceptor (NGI)
- Determine root causes on tool defects and their impacts on product and discuss top-level engineering with customers (Army, Lockheed Martin, Navy) proposed fixes to provide transparency and dependable products
- Apply excruciating attention to detail to mitigate manufacturing defects on end-product valued on the order of tens of millions of dollars for national defense and ensure mission success against pressing timelines

Education

Georgia Institute of Technology

M.S. in Computer Science - Computing Systems

Atlanta, GA

Enrolling Fall 2022

University of Michigan

M.S.E. in Aerospace Engineering - Computation

Accolades: Graduate Student Instructor

Ann Arbor, MI

August 2020 - May 2021

B.S.E. in Aerospace Engineering

September 2018 - August 2020

Awards and Accolades: Summa Cum Laude, Dean's List, University Honors, 1st Generation Engineer, 1st Generation STEM

Projects

RFID Spotify Raspberry Pi Jukebox

Software Engineer

April 2022 - Current

- Using the spotipy and raspotify python libraries, integrated a MFRC522 RFID card reader with Spotify's web API to play selected playlists and tracks through a Raspberry Pi
- Improved efficiency and scalability with JSON data storing of the RFID hash id with the associated Spotify context URL's
- Automated script start-up on boot with crontab and launcher shell to enable a fully functioning embedded system

Google Maps Tourist API

Full-Stack Engineer

January 2022 - Current

- Integrated Python script with google-maps API to sort and parse highly rated locations to generate tourist waypoints en-route given a start and ending location
- Allow customizable search parameters to expand the range of options allowing the user to generate a more personal route
- Plans to integrate Github-pages for the online deployment of the web application

Hypersonic Ramjet CFD Simulation

Graduate Project - Aerospace Computation

November 2020 - December 2020

- Developed Python algorithms to numerically approximate flow-fields within and around a hypersonic ramjet and interface flow-field results with L^AT_EX to enable automatic report compilations
- Recently re-factorized code with numba JIT compiler and optimized code to reduce program run-time by 90%
- Used Git and employed version control to simultaneously work across personal and academic workstations

Skills & Extracurriculars

Languages: Python, C++, Matlab, Mathematica, Arduino (C/C++ based), Javascript

Web Development: React, CSS, HTML, Django

Typesetting: L^AT_EX, Markdown, T_EX, Microsoft Word/Office

Miscellaneous: GitHub, Linux, Github-Pages, Command Line interface, VS Code, Raspberry Pi

General: Microsoft Office, Word, PowerPoint, and Excel, Adobe, Xfoil, AVL, ExpressPCB, ExpressSCH, STK

Groups: Utah C++ Programmers, Downtown Coding SLC, Salt Lake City Python, Salt Lake City Developers