

Jordan Irgang

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Professional Experience

BAE Systems

Aug 2022 – present | San Diego, CA

Jr. Software Engineer

- Developed Docker container infrastructure for fluentd data log aggregation within the GXP Explorer kubernetes/rancher On-Prem environment.
- Configured 20+ containers to remove hardcoded config files, using Apache Ant and Gradle.
- Automated config files to XML conversion, BASH Docker container verification, and Swagger API calls to Python interface.
- Implemented PowerShell customer-facing race-condition smoke tests and C++ XML/JSON image processing unit tests.
- Solved bugs within Apache Camel messaging routes, Java Boolean logic for queries, and BASH scripting within Dockerfiles.
- Built a C++ OpenDIS mock server for networking AFSIM packets using UDP and Wireshark.

NAVSEA, Naval Surface Warfare Center, OPA

Sep 2020 – Mar 2021

Student Trainee- Machinery, Research, Logistics

Philadelphia, PA

- Collaborated with engineers onboard an active Navy aircraft carrier and lab for Oily Waste System inspections and operations.
- Sourced non-corrosive alternatives for faulty sump pumps.
- Drafted lab floor plans and P&ID for piping, signals, and electrical drawings with AutoCAD.

Lockheed Martin

Sep 2019 – Mar 2020

System Integration and Test Engineer(Co-op)

Moorestown, NJ

- Forwarded data logs from Red Hat Linux radar system simulation after operation.
- Implemented custom and existing test procedures for radar system.
- Revitalized program automation with Python and Robot Framework scripts used in availability and unit testing.

ASRC Federal Space and Defense

Sep 2018 – Mar 2019 | Suitland, MD

MOST Engineer/Mechanical Designer Co-Op (NOAA, NASA)

- Modernized GOES series Java satellite availability application, which was used to save NOAA on building a new GOES satellite.
- Led Restore-L shielding gasket acquisition effort including radiation shielding calculations and compiling product solutions.
- Modeled 14+ CAD mass simulators, matching mechanical properties to counterparts, with ITAR drawings with relevant GD&T dimensions, BOM, and NASA specific markings.

Projects

Autonomous Ocean Cleaner [🔗](#)

Winner of Philly Code Fest SAP Most Innovative Hack Award

Project: A computer vision/ machine learning trash detection and collection autonomous boat robot.

My role: CAD, 3D printing, wiring, OpenCV/GPIO integration.

Snap Gloves [🔗](#)

Winner of MakeMIT Innovative Use & Incorporation of 5G/IoT/Sensors Award

Project: An IMU based motion IoT wearable glove to interface with industrial hardware.

My role: CAD, electrical schematics, work breakdown structures, IMU data I2c bus, UDP.

Safety Seal [🔗](#)

Winner of Philly Code Fest Linode 2019 Best Hardware Hack Award

Project: An IoT pill box robot to combat opioid abuse by linking pill dispensing and monitoring to a Doctor's computer.

My role: Fabrication, Android app, Node.js based server, Serial to motor actuation.

Easy Pad- Pad Manufacturing Machine for Nepal [🔗](#)

Mechanical Engineering Senior Design Project

Project: A low-cost feminine sanitary pad manufacturing machine and transfer document.

My role: McMaster-Carr parts and models, P&ID documents, piping, flow diagrams, work breakdown structures, Gantt charts, schematics for power supply, solenoid valves, stepper motors, and programming.

Pneumatic Air Muscle (PAM) Based Exoskeleton [🔗](#)

MakeMIT 2022 Funded Entry

Project: An over-the-arm exoskeleton with EMG sensor and accessibility phone app actuation designed to augment movement for those with muscular dystrophy. Funded by MakeMIT.

My role: CAD, 3D printing, assembled PAMs, piping, wiring, networking, and Serial.

Education

Drexel University

Bachelor of Science in Mechanical Engineering

Sep 2017 – Jun 2022 | Philadelphia, PA

Achievements:

- Selected to represent Drexel University at ICRA 2022, displaying robotic projects.
- Presented to prospective mechanical engineering students.
- Won awards in four hackathons at MIT, NYU, and Drexel.

Skills

Programming

C#, C++, Python, MATLAB, Java, JavaScript, Visual Basic, BASH & DOS/Powershell Automation, XML, JSON, Docker, Network Protocols

Dev Tools

Linux, Wireshark, Git, SSH, Robot Framework, MicroPython, Arduino, ROS2, Rviz2, gazebo, VS Code, Node.js, Kubernetes, Rancher, Proxmox, Winsock