VEDANSH GOENKA

Student. Maker. Photographer.

CONTACT

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SKILLS

3D MODELING & CAD/CAM:
- Fusion 360, OnShape, Creo, & Solidworks
- Blender & Meshmixer

3D PRINTING:
- PrusaSlicer, Slic3r, & Ultimaker Cura
- Compiling Firmware
- Gcode Optimization

MANUFACTURING:
- Drills, Saws, Routers, Grinders, etc.
- Calipers & Micrometers
- Polymer 3D printers (FDM, SLA, SLS)
- Metal 3D printers (DMLS)
- CNC Router/Milling/Lathe
- Laser & Vinyl Cutters

ELECTRONICS:
- PC Hardware
- Soldering
- Raspberry Pi & Arduino
- IOT Sensors

WEB DEVELOPMENT:
- HTML, CSS, & JS
- Bootstrap

CONTENT CREATION:
- Full Adobe Suite
- DaVinci Resolve
- Inkscape

PROGRAMMING/SCRIPTING:
- Python & Java
- SQLite
- Shell/Bash
- Git

OTHER TOOLS:
- Office/Drive
- Command Line

WORK EXPERIENCE:

Lockheed Martin Space - Engineering Intern (Summer 2021)

Additive Design Manufacturing Center (ADMC)
- Designed tooling to recapture unused metal powder for the X Line 2000R
- Performed material analysis (stress, strain, etc.) on manufactured parts.
- Basic machine operation and print optimization.

Solder Fatigue Analyst (Electronics Packaging)
- Learned electronic component properties relating to solder joints.
- Performed solder fatigue analysis using Excel and pre-derived formulas.
- Proposed component replacement recommendations to PCB Engineers.

Deployment Mechanism for 3D Printed Solar Array Truss
- Designed a precise, easily 3D-printable panel alignment mechanism
- Collaboratively designed a system to aid in a deployment demonstration for our customers.

NOTABLE PROJECTS:

3D Printed CNC Router

Built a metal-capable 3D printed CNC from scratch
- Convinced school administration (and robotics team) for funding
- Designed/Built from scratch in my garage, capable of cutting aluminum.

VP of Engineering - Mitty Robotics Team

Led designing/manufacturing of complex mechanisms for FRC
- Teach my peers CAD , equipment operation, and project organization.
- Use a variety of tools— see manufacturing skills —to fabricate my team's designs.

Ongoing Entrepreneurial Venture - "Sentry Security"

An app interface for antiquated pre-wired security systems
- Enabling app-based configuration for alarm systems installed over 15 years ago
- Alpha units deployed for over nine months; Publicly available Summer 2021

State Level Science Fair

Won award for a complex magnet-based fully 3D printed lock
- 1st Place @ Synopsys Science Fair & numerous other accolades
- 4th Place (Honorable Mention) @ State Science Fair

ACADEMIC BACKGROUND

Archbishop Mitty High School

Class of 2022

GPA: 4.6

Principal's Honor Roll (4.0+) - All 6 semesters

120+ Volunteering Hours

AP Courses:

Calculus AB & BC, Statistics, Phys C: Mech & Phys C: Elec/Mag, Computer Sci A, Eng Lit/Comp & Eng Lang/Comp, Microecon & Macroecon, US History, and World History.

Club Involvement:

Robotics - VP of Engineering
Mitty Advocacy Project - Gun Violence Prevention Member
Astronomy Club - Senior Member
Photography Club - Senior Member