

Soham Gandhi

Secret Clearance | 973-216-6660 | Ashburn, VA | sgandhi25@vt.edu | in/soham-gandhi/ | sgandhi10.github.io

EDUCATION

B.S. in Computer Engineering & B.S. in Electrical Engineering

Major in Controls, Autonomy, & Robotics and Machine Learning at Virginia Tech
Honors Collaborative Discovery Diploma (anticipated)
Minor in Computer Science (anticipated)

Blacksburg, VA

Expected May 2025

Junior Honors

GPA: 4.0

Calhoun Honors Discovery Program

Transdisciplinary program in collaboration with major corporations
Integrates different areas of study to solve sociotechnical problems with industry partners

Blacksburg, VA

August 2021 – Present

SKILLS

Programming: Python, Java, C++, C#, Bash, CSS, HTML, LATEX, PHP, MATLAB

Platforms: Unity, VR/AR, LTSpice, Git, Fusion 360, AutoCAD, SolidWorks, OpenCV, TensorFlow

Hardware & Interfaces: Raspberry Pi, Arduino, Teensy, i2c, SPI, RS232, UART

EXPERIENCE

General Dynamics Mission Systems | *Maritime Software Engineering Intern* | Fair Lakes, VA May 2022 – July 2022

- Worked on PXE booting Centos 8 Stream using DHCP, TFTP, and NFS
- Worked with file systems like initramfs, squashfs, and tmpfs to PXE boot the operating system to ram
- Modified kickstarts to make them STIG compliant and meet DOD requirements
- Created bash and python scripts to automate tasks to simplify the install process

DREAMs Lab | *Research Assistant* | Blacksburg, VA

September 2021 – May 2022

- Coded in python to increase capabilities of a legacy inkjet & FDM printer (Rize One)
- Worked on integrating inkjet polymers with FDM materials to increase material properties
- Created custom parts in SolidWorks to increase compatibility with 3rd party materials

InSignex | *Intern* | Gujarat, India (Virtual)

May 2020 - June 2021

- Developed an automated irrigation system for banana farmers to collect and evaluate data using python, flask, and MYSQL
- Prototyped designs and measured power draw of circuitry using shunt resistors and a NodeMCU
- Created a proof of concept for the user interface utilizing Adobe XD

PROJECTS

Haptic Tactics | Boeing | *Co-developer*

January 2022 - Present

- Created a hand-held proxy to house electrical components using SolidWorks to simulate drilling using virtual reality
- Integrated hand-held proxy with Unity to provide an immersive environment using the HTC Vive Pro
- Worked with employees at Boeing to receive feedback and make improvements to system

Food Science NLP | *Co-developer*

September 2021 - Present

- Analyzed data from 40,000+ abstracts and created automated scripts to clean, sort, and filter data
- Used Gensim to create word2vec models to understand the correlation what food science know about flavors
- Visualized models using Orange and Gephi to understand relations created by the word2vec model

Computer Vision Launcher | *Co-developer*

August 2020 - July 2021

- Created a launching mechanism to locate an object and launch a projectile based the forces acting on projectile
- Designed prototype using CAD software and built using 3D printing and laser cutting
- Developed software using a dual camera system to triangulate objects in 3D space

PUBLICATIONS

Gandhi, S., & Shah, A. (2022). Continuous Monitoring of Banana Plantations. In F. Thakkar, G. Saha, C. Shahnaz, & Y.-C. Hu, Proceedings of the International e-Conference on Intelligent Systems and Signal Processing Singapore. https://doi.org/10.1007/978-981-16-2123-9_31

AWARDS

Honors College Norrine Bailey Spencer Strong Start Honoree

2022

HackDuke: 1st Place in Education Track & Best Financial Hack by Capital One

2021