Neel Adwani

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EDUCATION

- **University of Petroleum and Energy Studies** — Dehradun, India
  Bachelor of Technology in Computer Science and Engineering — *July 2019 - May 2023*

SKILLS

- **Languages**: Python, C++ (Arduino), MATLAB, PHP, JavaScript, SQL
- **Technologies and Frameworks**: Fusion 360 (CAD), Flask, OpenCV, scikit-learn, PyTorch, Tensorflow

EXPERIENCE

- **Robotics Research Center, IIIT-H** — Hyderabad
  Research Intern — *June 2022 - Sept 2022*
  - Implemented a functional robotic arm for visual servoing on an Unmanned Aerial Vehicle.
  - Developed a framework for safe landing of Unmanned Aerial Vehicles, based on images from depth camera.

- **Cyber Crime Cell** — Noida
  Cyber Security Intern — *Sept 2020 - Nov 2020*
  - Conducted security audits to identify vulnerabilities and threats in government and affiliated websites.

PATENTS

- Shubhi Sharma, Neel Adwani, Gauraang Sharma, **Aerial Healthcare Management Device**, Application Number: 202111030733, Indian Patent Office (2021)

- Sachi Choudhary, Neel Adwani, Prashant Shukla, Rashmi Sharma, **System and Method for Contact Less Disinfection of Public Places**, Application Number: 202111039747 A, Indian Patent Office (2021)

- Sachi Choudhary, Neel Adwani, Gauraang Sharma, Prashant Shukla, **An Accident Detection System and Method**, Application Number: 202011031956, Indian Patent Office (2020)

- Shubhi Sharma, Neel Adwani, **Sanitizing Apparatus and method for Dispensing Sanitizer Solution**, Application Number: 202011020418, Indian Patent Office (2020)

- Dr. Amit Verma, Neel Adwani, Dr. TP Singh, Rohit Tanwar, Anupam Singh, Nitin Uniyal, **Vehicle Theft Recovery System**, Application Number: 202011012771, Indian Patent Office (2020)

PUBLICATIONS

- Amar Shukla, Neel Adwani, et al, **Geospatial Analysis for Natural Disaster Estimation through Arduino and NodeMCU Approach**, GeoJournal, 2021. https://doi.org/10.1007/s10708-021-10496-1

- Neel Adwani, **EsoCipher: An Instance of Hybrid Cryptography**, viXra, 2020. https://doi.org/10.13140/RG.2.2.33286.40000

OPEN SOURCE PROJECTS

- **Brain Controlled Robotic Joint** — 2021
  Built at VenusHacks, UCI and Hack-ccessible
  - Amputees face physical and emotional challenges in their day-to-day life, and their struggle is immeasurable. To solve this problem, I'm presenting a robotic joint, that can be used as a limb (once combined with prosthetics) and can help them control an artificial arm or leg using their brain. Although the headset contains only a single channel, it can still be a stepping stone towards a cutting-edge technology.
  - Tech Stack: Brainsense BCI, Arduino (C++), HC-05 Bluetooth

- **QuickSesh** — 2021
  Built at MLH INIT
  - An online tool to create or join random study sessions, based on Jitsi Meet. (basically omegle for education)
  - Tech Stack: Python, Flask, Cloud

- **PresentQuick** 2021

  Built at Tigerhacks, University of Missouri

  - PresentQuick is a tool that can convert a long article or research paper into a simple presentation, that makes it easier to understand. It uses NLP to analyze long pieces of content and recollects the most important sentences and breaks them down into slides. This web application can be used either for presenting something to the audience of even to get a simple understanding of a complex topic.
  - Tech Stack: Python, Flask, Cloud, NLP, nltk-python, python-pptx

- **Character.io** 2022

  Built at Data Day Grind III by MLH

  - Character.io loads a new set of cartoon characters whenever the page is reloaded. If you don't like that set, just press the space bar and it'll load a new one for you! The algorithm behind character.io uses the power of generative adversarial networks, which are nothing but just two neural networks competing against each other. Where the generator would generate a character set, and the discriminator would evaluate if the character set is good or not. Both of them are trained against each other.
  - Tech Stack: Python, Flask, Tensorflow, GANs

ACCOMPLISHMENTS

- Represented the University of Petroleum and Energy Studies at AIAA DBF '22 at the fly-off in Wichita, Kansas
- Ranked 9th globally in MLH INIT 2022, out of 50000 Hackers.
- **First Overall** - Hack the Runway by Major League Hacking, 2022
- **First Overall** - Best General Hack at BostonHacks by Boston University, 2021
- **First** - Best Social Impact Hack at SBUHacks by Stony Brook University, NY, 2021
- **First Overall** - Social Entrepreneurship Competition by the American University in Cairo, Egypt, 2021
- **First Overall** - Surfs up Hacks by Major League Hacking, 2021
- **First Overall** - Hack-ccessible by Major League Hacking, 2021
- **First Overall** - Hack at Home II by Major League Hacking, 2021
- **First** - Best Hack for Natural Disasters by IBM at Hackbout by HackClub NMIT, 2020
- **Second Overall** - Neighborhood Hacks by Major League Hacking, 2021
- **Second Overall** - HackBMU by BML Munjal University, Gurugram, 2020
- **Third Overall** - Future Health Hackathon 2071 by the Ministry of Health and Prevention, UAE, 2021
- **Third Overall** - Bon Voyage Hacks by Major League Hacking, 2021
- Best Re-Think Automotive Hack and Most Creative use of Twilio at PennApps by University of Pennsylvania, PA, 2021
- Best Hardware Hack at University of California, Irvine, CA, 2021
- Best Web Monetization Hack at BorderHacks by University of Windsor, Canada, 2021
- Best Hardware Hack at Hack the Earth by Hack the Earth Foundation, Canada, 2021
- Best Undercover Hack at Agent:Hacker by Major League Hacking, 2021
- Best Hack for the Wild at WildHacks by Major League Hacking, 2021
- Most SharkHacks Shark Hack at SharkHacks3 by Major League Hacking, 2021
- Best Use of Google Cloud at Hacky Birthday MLH by Major League Hacking, 2021
- Best Hardware Hack at Mental Health Hacks by Major League Hacking, 2021