Sparsh

Student

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Education

Radiant International School, Patna, India *(2018 – 2022)*

- 94% in AISSE (Physics, Chemistry, Mathematics, English, Sanskrit and Computer Science)
  March 2020
- Commended by multiple professors for exemplary innovations and development skills.
- Maintained A+ average in all English, Computer Science, and Mathematics Classes.
- 1st place in National Science Olympiad
  2013, 14, 15, 16, 18
- 1st and 2nd place in International Social Science Olympiad
  2019, 17
- 1st place in National Cyber Olympiad
  2014, 15, 16, 19
- 1st place in International English & Maths Olympiad
  2016, 21 | 2016, 21

Skills

Programming

C# • C++ • CSS • HTML • Python

Proficient

JavaScript • GML • Processing.org

Experienced

SQL • Java

Familiar

Libraries

Nltk • Re • Open-Cv • Matplotlib • Numpy • Base_Camera • Imutils • Threading • Requests • Bs4 • Beautifulsoup

Tools & Platforms

Fusion 360 • Moi 3D • Adobe Cloud • Office Suite •

Hard Skills

3D Modelling • Web Designing • Game Development • AI Programming • Logo Designing • IoT Boards and Sensors

Soft Skills

Problem Solving • Leadership • Time Management

Websites

Red-Flags • Clest • Portfolio • Edge of Space • Thermal Floater

Interests

Sketching • Painting • 3D Modeling • Innovating

Passionate second-year student at NUS majoring in Computer Engineering enriched by the Innovation Design Programme and NUS College. Founded the company Incy Tech that aims to reduce carbon footprint using efficient and innovative solutions. Fabricated numerous original innovations and guided students as the Student Mentor Head of the Atal Tinkering Labs, utilizing every avenue to carve out solutions for tomorrow

Experience

Keychron India: Web Designer *December 2021*

- Designed **user interface** by delivering an **attractive**, **user-friendly** and unique website
- Shortlisted as the winner of **UI-UX Contest** and received a mechanical keyboard as the prize

Projects & Achievements

S.C.A.R.R: Sewage Clog Assertion & Remover Robot *June 2018*

- Fabricated a **wirelessly controlled mechanism** to move into the sewers and collect & **unclog the drains**
- Used an Arduino Wi-Fi and created a **simple mobile interface** to interact with S.C.A.R.R.
- Won the **first prize** amidst 133K+ students. Awarded by Hon'ble **Minister of IT and Electronics**, Mr Ravi Shankar Prasad, and the **head of Intel India**, Ms Nivruti Rai.

Hacker Detector *December 2019*

- Created a device to alert users against hacking attempts over Wi-Fi using ESP8266 & MAX32620
- Successfully **prevented ARP** and **DNS spoofing** attempts, detected false websites & alerted user

Creation Vs. Creator *April 2020*

- Created a mobile platformer game consisting of **18 levels** and a background storyline in Unity
- **Reduced lag** and game size using Android Studio and added save points at various levels

Sunken Torch *January 2021*

- Created a torch that lights up by only **harnessing the heat** generated from the **human body**
- Developed **custom circuitry** using **Autodesk Eagle** to boost the voltage for lighting up the LED
- Selected by the **Indian Institute of Science and Research**, Tirupati's selection committee, won the first prize, & received funding.

Clest *May 2021*

- Developed a website to eradicate career-related anxieties and confusions w.r.t to user's interests & talents

Thermal Floater *October 2023*

- Developed a complex mechanism to generate electricity from the **thermal energy of the Sun**
- Implemented a **modular design** and simulated the design in **Fusion 360** to test its capabilities
- Improved the designs to enhance the efficiency of the model to produce around **10 kWh** per day
- Authored a research paper and proposed a **business model** to make it financially viable
- Conducted market surveys and **interviews of 30+ people** and incorporated their suggestions
- Won the **First prize** amongst 10K+ submissions, in the Children's Climate prize
- Received the **James Dyson Award** 's Runner up position in Singapore
- Secured the top 10 position in Samsung Solve For Tomorrow and got mentoring and support.
- Achieved the **People's Choice Prize** in a global event hosted in Berlin by Stiftung Entrepreneurship

AI for S.C.A.R.R. *August 2021*

- Developed an AI using **Open-CV** and **Imutils** to automate S.C.A.R.R to unclog and retrieve garbage
- Successfully implemented RPi & Python to interface with the servos and **improved connectivity**

Mathematical Decipherer *August 2021*

- Developed an AI to solve **mathematical word problems** based on area bounded regions
- Created the AI in python using **nltk corpus** and **re** to tokenize & understand the user input and solve it
- Added **autocorrect** and **speech recognition** to the user's input to make it easier to deploy

Edge Of Space *October 2021*

- Developed a shooting game with **variable time limits** and a **retro theme** in **Game Maker Studio**.
- Converted the game to JavaScript and created a website to host the game online

Agro II *November 2021*

- Ideated a free-space **laser communication system** with maintained **dynamic alignment**
- Established robust voice communication using RPi in an **off-grid system** with reliable data-rates
- Selected in ATL Space Challenge's Top 25 amongst 6.5K+ students & received prizes by **ISRO & CBSE**

Positions of Responsibility

Exhibition: ATL Community Day *April 2019*

- Organized the Atal Tinkering Lab Exhibition, showcasing numerous **IoT tech exhibits** made collaboratively by student teams from **15+ invited schools** and **60+ participating students**.

Incy Tech: Founder *December 2021*

- Founded and ran a company that aims to **reduce carbon footprint** using innovative solutions.
- Funded by the **Government of India** and investors to bring the aforementioned products to the market.
- Motivated towards developing **improved** & **efficient products** to make an impact in the society
- Recognized as the **youngest entrepreneur** and shortlisted in the **top 10** amongst entrepreneurs from all over the world to represent the venture Incy Tech.

Atal Tinkering Labs Design Thinking Workshop *July 2023*

- Organized a 10 day workshop for the young minds at NGOs and Rainbow Homes Orphanage and dived into an interactive realm of 3D modelling, the Internet of Things, and prototyping techniques.