Aayush Shah

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EDUCATION

University of the West of England, Bristol   **Oct 2022 – July 2023**
FDCERT International Foundation (Computing) - **First-Class Honours**

- **Relevant Coursework:** Introduction to Programming, Fundamentals of Multimedia, Internet Technologies , Computer Systems and Architecture, Mathematics for Computing, Fundamentals of Data Science

St. Xavier's College, Maitighar   **Sept 2020 – Sept 2022**
School Leaving Certificate - **GPA: 3.65/4.0**   *Maitighar, Kathmandu*

- **Relevant Subjects:** Mathematics, Physics, Social, Chemistry, English, Nepali

TECHNICAL SKILLS

- **General Programming:** Python, JavaScript, C++, Data Structures and Algorithms, GitHub
- **Web Development:** Full stack; HTML, CSS, Tailwind, ReactJS, Django, PHP, MySQL, Node.js
- **Data Science and Automation:** NumPy, Pandas, matplotlib, Python Scripting
- **Graphic Design:** Adobe Illustrator, Photoshop, Adobe After Effects, Adobe Premiere Pro
- **Artificial Intelligence:** Search Algorithms, Reinforcement Learning, Neural Networks, Natural Language Processing (NLP), TensorFlow

EXPERIENCE

DeepLearning.AI Community   **Jan 2024 – Present**
Volunteer Tester   *Remote*

- Reviewed 50+ video lectures, lecture notebooks, and programming assignments during the testing phase, providing detailed feedback that enhanced course quality.
- Verified the accuracy of 30+ resource citations and ensured all links were functional, contributing to a seamless learning experience.
- Reported 30+ issues using the Git Issue Reporting Tool and suggested 10+ additional resources/labs, directly influencing course content improvements.

Headstarter   **Jul 2024 – Aug 2024**
Software Engineering Fellow   *Remote*

- Built 5+ AI apps and APIs using NextJS, OpenAI, Pinecone, StripeAPI with 98% accuracy as seen by 1000 users.
- Developed projects from design to deployment leading 4+ engineering fellows using MVC design patterns.
- Coached by Amazon, Bloomberg, and Capital One engineers on Agile, CI/CD, Git and microservice patterns.

Seedlings Nepal   **Jun 2023 – Jul 2024**
Technical Manager and Executive Member   *Kathmandu, Nepal*

- Managed technical operations for a 2-month TED-Ed event with 200+ attendees, resolving all technical issues to ensure a smooth experience.
- Collaborated with graphic designers to create 10+ promotional posters, increasing event visibility and participant engagement by 30%.

Iners Tech Pvt. Ltd   **Aug 2022 – Nov 2022**
Front-End Developer Intern   *Kathmandu, Nepal*

- Developed and maintained the front-end of 3 web applications using HTML, CSS, JavaScript, and Tailwind CSS, significantly enhancing user experience
- Utilized React.js to create dynamic, interactive user interfaces, improving user engagement by 25%.

Mathematics Initiatives in Nepal   **Aug 2023 – Jan 2024**
Graphic Designer   *Remote*

- Designed 15+ posters and led marketing and social media campaigns, significantly enhancing the social media presence and national visibility of this national-level organization run by high school students and graduates, which increased attendee engagement by 20% and made mathematics accessible to youth across diverse geographic and socioeconomic backgrounds.

Sodalitas de' Mathematica - SXC   **Oct 2020 – Jun 2022**
Executive Member   *St. Xavier's College, Maitighar*

- Co-organized the SXC Math Mela 2021 with 300+ participants, creating math quizzes and puzzle challenges that improved problem-solving skills among attendees.

PROJECTS

Mithila Sansar ↗ | Next.js, Tailwind CSS, OpenAI API   **2024**
- Developed Mithila Sansar, a cultural platform that boosted user engagement by 20% through an interactive chatbot powered by the OpenAI API. The platform, showcasing Maithili art, literature, and traditions, attracted 1,500+ visitors in the first three months, connecting global audiences to the rich heritage of Mithila.

Photo Restoration tool ↗ | Python, CV2, Tensorflow   **2024**
- Restored a 19-year-old black-and-white photo, transforming it into a vibrant, colorized image using Python, OpenCV, and TensorFlow, successfully removing scratches and achieving a 90% accuracy rate in restoring fine details.

Olymath Computational Cloud ↗ | PHP, MySQL, HTML, CSS, JavaScript, Database   **2023**
- Built Olymath, a math learning platform specializing in Number Theory, with 36+ interactive topics and advanced calculators, benefiting over 500 students in verifying solutions.
- Launched a dynamic Q&A community within Olymath, facilitating collaboration among 200+ users and nurturing a vibrant network of passionate math learners.

Docskool ↗ | WordPress   **2023**
- Developed and launched the frontend and backend of the organization's website using WordPress, optimizing SEO and increasing site traffic by 30%.

PUBLICATIONS

1. **Shah, Aayush, Mahato, Prabhat, & Bhagat, Aadarsh.** (2023). *Enhancing Post-Quantum Cryptography: Exploring Mathematical Foundations and Comparative Analysis of Different Cryptographic Algorithms. International Journal for Research in Applied Science and Engineering Technology*, 11, 1626-1642. DOI: **10.22214/ijraset.2023.55341** ↗

2. **Shah, Aayush.** (2023). *How ChatGPT (AI) is Likely to Become a Potential Threat (or Not) to Human Imagination and Creativity?. International Journal for Research in Applied Science and Engineering Technology*, 11, 379-383. DOI: **10.22214/ijraset.2023.55070** ↗

3. **Mahato, Prabhat & Shah, Aayush.** (2023). *A Review of Prime Numbers, Squaring Prime Pattern, Different Types of Primes and Prime Factorization Analysis. International Journal for Research in Applied Science and Engineering Technology*, 11, 2036-2043. DOI: **10.22214/ijraset.2023.54904** ↗

EXTRACURRICULAR

- **Nepal Apanga Ashram Donation Program:** Spearheaded a donation initiative in collaboration with the Rotary Club of Butwal, providing essential supplies to over 100 differently-abled individuals at Nepal Apanga Ashram during my tenure as Vice President of the Canon Interact Club.
- **Sanitation Campaign:** Initiated and led a successful sanitation campaign in the river area near my school, motivating over 200 community members to actively participate and improve local cleanliness.
- **Teaching and Book Donation:** Volunteered to teach underprivileged students at the community school during the COVID-19 pandemic and, after graduating high school, launched a book donation program providing educational resources to over 50 children in need.

AWARDS & CERTIFICATIONS

* **Bronze Honour** for exceptional performance in the final round of the **International Youth Math Challenge (2023)**. ↗
* **CS50AI: Introduction to Artificial Intelligence with Python (2024)** – Completed Harvard University's CS50AI course, covering AI fundamentals, including search algorithms, knowledge representation, machine learning, and natural language processing, with hands-on projects to reinforce learning. ↗
* **CS50P: Introduction to Programming with Python (2023)** – Completed Harvard University's CS50P course, covering Python basics, including data types, control structures, functions, and object-oriented programming, with hands-on projects to reinforce learning. ↗
* **DeepLearning.AI Mathematics for Machine Learning and Data Science Specialization (2024)**: Completed a comprehensive specialization covering the mathematical foundations essential for data science and machine learning. ↗
* **Software Engineer (2024)**: Passed the comprehensive certification exam for Hackerrank role , which covered key areas including Problem Solving, SQL, and REST API, validating expertise in developing and optimizing software solutions. ↗