Anshumaan (Manas) Singh

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EDUCATION

Stony Brook University, Stony Brook, NY   *May 2023 - May 2027 (Anticipated)*

Bachelor of Science in Computer Science

CGPA: 3.97/4.0

Honors: Computer Science Honors, University Scholars, Dean's List August 2023 - December 2024;

Awards: YouAreWelcomeHere Award, Global Excellence Award

Programming Languages: Python, Java, HTML, CSS, JavaScript, MySQL

Relevant Coursework: CSE 114: Object-Oriented Programming, CSE214: Data Structures, CSE215: Foundations of Computer Science, AMS210: Applied Linear Algebra, AMS310: Probability and Statistics, AMS161: Calculus II

Certifications (DeepLearning.AI): PreTraining LLMs by Upstage and Specialization in Machine Learning Course by Stanford.

PROFESSIONAL WORK EXPERIENCE

Humanity Unleashed (Humun.org)   **(Remote)**

Machine Learning Engineer & Software Engineer   *November 2024 – Present*

- Developing methodologies for value elicitation using LLMs, enabling aggregation of individual values to inform bipartisan policy recommendations.
- Fine-tuning open-source LLMs on 10TBs+ of public policy time series datasets to improve policy outcome prediction and analysis.
- Designing an interactive policy modeling interface Web Application for policymakers and the public to examine historical data, predict impacts, suggest policies, and customize outputs based on individual and group values.

International Genetically Engineered Machine 2024 Research   **Stony Brook, NY**

Lead Web Developer & Machine Learning Engineer   *January 2024 – November 2024*

- Performed computational biology for building a miRNA–Detector Bacteria system for Human Non-Hodgkin's B-Cell Lymphoma.
- Increased project's outreach by spearheading development of a project wiki using HTML, CSS, JavaScript and Flask with 12,000 lines of code, attracting 15 stakeholders and investors.
- Developed an open source Retrieval Augmented Generation Q&A chatbot using LangChain and HuggingFace with ~ 95% accuracy on a simple accuracy benchmark, reducing hallucination through precise chat prompting.
- Further improved the detector system through molecular dynamic simulations to assess the binding of AGO2 and miRNA-326.

Omniscience Corporation   **Palo Alto, California, United States (Remote)**

Full Stack Web Developer Intern   *April 2023 – June 2023*

- Created a life insurance flask web app with 3000+ lines of code using HTML, CSS, JavaScript, Jinja and Bootstrap Library.
- Developed a SQL database to store insurance user data, showcasing problem-solving skills in data architecture.
- Containerized the application using Docker for seamless deployment & collaboration via a consistent technical environment.

PROJECTS

SBUGPT | Machine Learning Project   *February 2024 – May 2024*

- Collaborated with Stony Brook Robotics Club to build a Chatbot for the university using Python and libraries like HuggingFace, TensorFlow and Pandas by fine-tuning Meta's LLaMA2 Model on data scraped from the university's website.

Windows CenterStage | Machine Vision Project   *November 2023 – December 2023*

- Built a 500+ line Python program to zoom-in, track & keep the user's face centered on the camera using libraries like TensorFlow, OpenCV, Albumentations and NumPy by training a Facial Recognition Neural Network Model on over 6000 images.

Relinked | Web Development Project   *July 2022 – August 2022*

- Constructed a versatile web app as a universal database for organizing webpage links with customization features enhancing usability for stored links, showing adeptness in tailoring user experiences with 1500+ lines of code utilizing Python, Jinja2, HTML, CSS, JavaScript, SQLite3, and Flask.

LEADERSHIP

University Scholars Fellowship at Stony Brook University   **Stony Brook, NY**

Teacher Assistant   *January 2024 – December 2024*

- Mentored 20 incoming University Scholars students, gaining valuable teaching experience and leadership skills.
- Collaborated with University Scholar Program Director in course development, designing creative presentations, graphics, and videos to enhance learning engagement.