Unnati Agarwal

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EDUCATION

University at Buffalo, The State University of New York   **Expected May 2024**
*Bachelor of Science, **Biomedical Engineering** | Minor in **Computer Science***
3.93/4.00 GPA, Honors College, Deans List

INTERNSHIP EXPERIENCE

Baxter International, Skaneateles, NY   **May 2023 - Current**
Sustaining Engineering Intern – Manufacturing
- Perform production equipment capability testing and brainstorm and execute process and quality improvements
- Create custom parts and drawings for various tooling assemblies using PTC Creo and SolidWorks and assist in product development, material selection, prototyping and design reviews
- Work in a team to support planned and unplanned Sustaining Design Engineering projects, Technical Cost Out projects, and Continuous Improvement projects within Operations Engineering and R&D

Conjunction LLC, Buffalo, NY   **January 2023 - May 2023**
Project Management Intern – Chronic Wound Healing Department
- Conducted evaluative testing of patented would healing ointment and part of spearheading a major pricing structure by redirecting focus on consumers' willingness to pay instead of the product cost
- Explored the client's wound-healing process through regular visits to the hospital (Erie County Medical Center) and understand client behavior and response to the product, which helps in developing a marketing strategy

Integer Holdings Corporation, Clarence, NY   **May 2022 - August 2022**
Research and Development Engineering Intern – Power Systems Feedthrough and Coatings Department
- Programmed a web application using python, HTML, and flask framework to analyze over 400,000 data sets from the dilatometer and provide graphs and recommendations on the sintering profile of ceramics
- Engineered and implemented a solution to prevent and remove gold contamination from feedthrough batteries and amplified the yield of the products by 36%, which increased sales and profits

Zydus Hospital, Ahmedabad, India
Biomedical Engineering Intern   **June 2019 - August 2019**
- Trained over 300 nursing staff on the use of new medical equipment and repaired fluoroscopy machines, dialysis machines, ventilators, and patient beds
- Observed advanced surgeries like craniotomy, robotic surgery, cancer surgery and provided emergency help
- Learned the use of medical instruments like cautery, cardiac monitors, defibrillators

LEADERSHIP EXPERIENCE

Undergraduate Student Association Inc., University at Buffalo, NY   **May 2023 - Current**
Chief Financial Officer - Treasurer
- Responsible for oversight and disbursement of the SA's $4.6 million budget including over 170 club budgets
- Ensure compliance with Federal and State Not-for-Profit laws, SUNY Mandatory Student Activity Fee guidelines, and Student Association Financial Policies and act as chair for senate finance committee.
- Lead the Student Association Finance and Procurement Department including Professional and Student Staff
- Develop and implement new strategies and policies to establish long-term business objectives and provide effective organizational practices.

Google Developers Student Club, Buffalo, NY   **January 2023 - Current**
Student Lead / President
- Lead a team of seven core team members and collaborate with Google and the Institute of Artificial intelligence and Data Science to organize technology sessions like android development and weekly Leetcode jams
- Conduct info sessions and hands-on lab workshops for over 300 members on GCP cloud computing and Machine learning using Big Query, Vertex AI, Docker, and Kubernetes

Campus Living, University at Buffalo, NY   **August 2022 - Current**
Academic Assistant for Honors College

- Teaching assistant for 90 honors first-year students for an introduction to computer science courses which include programming in Python, Java, JavaScript, HTML, and Scala. Use creative methods like games, flashcards, and videos to help students understand concepts that can be applied to their labs and programming assignments
- Collaborate with six academic assistants to organize educational programs, including study sessions, time management strategies, and social events that can help freshman transition to college

Amazon funded Women in Science and Engineering, Buffalo, NY   **August 2022 - Current**
Peer Mentor and WISE representative
- Support and encourage the success of young women in STEM by presenting the importance of STEM careers at three high schools in Buffalo, schedule individual meetings with mentees, and show them a day in my life
- Educate women and first-generation students on the competition within the STEM market and how to overcome it

Office of Academic Integrity, University at Buffalo, Buffalo, NY   **August 2022 – May 2023**
Academic Integrity Ambassador
- Promote an inclusive and honest academic environment by educating over 20,000 students about the academic integrity rules through the medium of presentations, events, and tabling at the University at Buffalo
- Design and implement prevention efforts to reduce high offense rates for academic integrity violations for online classes and handle Honor Code cases for students with Academic Integrity violations

UB Tech Squad, University at Buffalo, NY   **April 2021 - May 2023**
IT Supervisor and Technician
- Supervise counter consultants and solve complicated software issues, including reimaging operating systems, inadequate or incorrect interfaces, data handling, cyber security, computing stations, and on-site services
- Handle scheduling for a team of over 40 consultants and train new staff on communication skills, professional etiquette, and technology services, including connecting to WiFi, resetting passwords, duo security, and mail services

Campus Living, University at Buffalo, NY   **August 2021- July 2022**
Resident Advisor for Honors College
- Fostered a positive, safe, and inclusive community for 40 honors, first-year students
- Organized and advertised diversity, relationships, personal development, and academic performance programs for over 900 residents. Solved roommate conflicts and helped foster a positive, safe, and inclusive community
- Managed administrative duties like budgeting, maintenance requests, incident reports, and room change requests

RESEARCH EXPERIENCE

Research Assistant at Arany Lab for SMART Materials   **June 2022 - Current**
- Designing a hand-held electrospinning machine based on user requirements using 3-D printing, Arduino, and electronic components that can have the ability to heal deep wounds without physical touch
- Analyze data on stiffness, structure, and healing ability of different polymers and test performance on live cells

Emerging Biometrics Lab for User Authentication, University at Buffalo, NY   **June 2021 - October 2021**
- Researched voice-based biometric identification systems that are used to disguise voices and proposed solutions of AI models on how to overcome fraudulent systems
- Examined emerging biometrics - brainwave, gait, heartbeat, gesture, and body features for user authentication

PROJECT DEVELOPMENT EXPERIENCE

Continuity Browser continuitybrowser.com   **August 2022 - May 2023**
- Developing a web browser that can seamlessly sync tabs across multiple devices and integrate openAI chatGPT along with privacy features to make web surfing seamless, secure, and productive for users
- Collaborate with a team of four members to launch the application on the Appstore, play store, and chrome store and completed the beta testing using the Kanban development method
- Successfully gained 100 active users from all over the world through organic marketing and startup competitions

Gyrowatch (Winner at Aging Innovation Challenge 2021)   **June 2021 - February 2022**
- Developed a prototype and business model for an electronic wristband that would use the technology of gyroscopes in satellites to cancel opposing forces and thus prevent essential tremors in Parkinson's patients

Health@Home (Winner UB Hacking 2020)   **August 2021 - December 2021**
- Launched a mental and physical health application for virtual assistance during covid using HTML and Python

- Augmented Artificial intelligence to determine illnesses, integrated suicide prevention helpline, and AI doctor

Hatch Wind Turbines   **August 2020 - December 2020**
- Constructed an efficient and cost-effective wind turbine working prototype to meet the Energy requirements of the University at Buffalo and performed extensive testing and analyzing various turbine factors
- Piloted the team to submit for a patent to use 3-D printed turbulent blades with dimples for the turbine to decrease wind resistance and improve efficiency

HONORS AND AWARDS

- Professor Emeritus Howard Strauss Memorial Award   **January 2023**
- Micro credential in Academic Ethics   **May 2023**
- Tau Beta Pi Member and Career Fair Organizer   **November 2022**
- NASEC 2022 Energy Conference University Representative   **November 2022**
- Aaron Bloch Award.   **August 2022**
- Grace Hopper – Women in Science and Engineering Scholarship recipient   **August 2022**
- Digital Badges in Community Engagement and Innovation   **August 2021**
- Completed extensive Leadership Academy at University at Buffalo   **January 2021**
- Women in Science and Engineering Scholarship   **August 2020**