

Unnati Agarwal

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EDUCATION

University at Buffalo, The State University of New York
*Bachelor of Science, **Biomedical Engineering** | Minor in **Computer Science***
3.94/4.00 GPA, Honors College, Deans List

Expected May 2024

REVLEVANT INTERNSHIP EXPERIENCE

Baxter International, Skaneateles, NY
Sustaining Engineering Intern – Manufacturing

May 2023 – August 2023

- Performed production equipment capability testing and brainstormed and executed process and quality improvements to support lean manufacturing engineering projects, Technical Cost Out projects, and Continuous Improvement projects within Operations Engineering and R&D
- Created custom parts and mechanical drawings for various tooling assemblies using PTC Creo and SolidWorks and assisted in product development, documentation, material selection, prototyping and design reviews

Conjunction LLC, Buffalo, NY
Project Management Intern – Chronic Wound Healing Department

January 2023 - May 2023

- Conducted evaluative testing of patented wound 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
Research and Development Engineering Intern – Power Systems Feedthrough and Coatings Department

May 2022 - August 2022

- 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

RELEVANT LEADERSHIP EXPERIENCE

Undergraduate Student Association Inc., University at Buffalo, NY
Chief Financial Officer - Treasurer

May 2023 - Current

- 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
- Directly manage the finance and procurement department of over 20 professionals
- Develop and implement new strategies and policies to establish long-term business objectives and provide effective organizational practices

Google Developers Student Club, Buffalo, NY
Student Lead / President

May 2023 - Current

- 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
Academic Assistant for Honors College

August 2022 - Current

- Teaching assistant for 90 honors first-year students for an introduction to first year engineering and scientific literacy courses. 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 and Women in Science and Engineering, Buffalo, NY**August 2022 - Current**Peer Mentor and WISE representative

- Champion the success of young women in STEM by delivering engaging presentations on the significance of STEM careers at local high schools in Buffalo and fostering one-on-one connections with mentees to provide personalized guidance and support
- Collaborate with women and first-generation students to identify and surmount obstacles, offering solutions and encouragement to ensure students' persistence and achievement in STEM disciplines

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

RELEVANT RESEARCH AND PROJECT 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

OldSmarts University <https://oldsmarts.com>**May 2023 – Current**

- Programming new APIs within OldSmarts University to seamlessly integrate artificial intelligence software, enhancing the platform's capabilities and user experience.
- Actively engaged in researching and formulating a forward-thinking business model, with a focus on achieving a precise product-market fit. This involves analyzing market trends, customer needs, and industry competition to drive strategic decision-making.

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 IN ENGINEERING

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| • Micro credential in Academic Ethics | May 2023 |
| • Tau Beta Pi Scholarship | May 2023 |
| • Professor Emeritus Howard Strauss Memorial Award | January 2023 |
| • NASEC 2022 Energy Conference University Representative | November 2022 |
| • Aaron Bloch Award for Benefiting Humanity | 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 |