HEATHER CHILDERS

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EDUCATION

Master of Environmental Data Science (MEDS) (Expected June 2024)
Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)

Academic Writing: Collaborated with internal and external clients to author two capstone project proposals, encompassing defining project scope and deliverables, researching background information, and outlining possible approaches with relevant programming languages and packages.
Leadership: Dean's Advisory Council Member (9/23–Present), Class of 2024 Co-chair (9/23–Present), Womxn in Science and Engineering Club Social Co-chair (5/23–Present)

Bachelor of Science in Biological and Agricultural Engineering (BAE) (June 2022)
University of California, Davis

Minor: Atmospheric Science
Honors: Dean's Honors List for Spring 2020
Leadership: Undergraduate Representative and Student Ambassador for the BAE Department (9/21–6/22), Society of Biological Engineers President and Events Coordinator (6/20–6/22)

PROFESSIONAL EXPERIENCE

Sikama International Inc., Santa Barbara, CA

Engineering Associate (9/21–6/23)

- Spearheaded the company's transition from hard copy to digital documentation, consolidating 400+ assembly manuals with version control to preserve tribal knowledge and streamline customer support
- Verified Bills of Materials with updated part numbers and quantities to prevent inventory backup
- Created SolidWorks parts and assemblies for new and existing machines to improve internal records
- Collaborated with the Senior Production Engineer and Director of Sales to utilize SolidWorks models as marketing materials and validate custom requests from high-value clients

Engineering Intern (6/21–9/21)

- Trained production staff on relevant software features and assisted staff with technical problems with MS Office Suite and Dozuki, ensuring a smooth transition to a modernized business model
- Led progress meetings with management staff to provide updates and discuss project milestones, ensuring alignment with organizational and senior leadership goals

UNDERGRADUATE CAPSTONE PROJECT

Development of a Solid-State Bioreactor for Protein-Enriched Feed from Almond Hulls (9/21–6/22)

- Collaborated with four students to generate project deliverables, including progress reports, Gantt charts, and presentations, ensuring instructors and clients were informed about project advancements
- Consulted with principal investigators to conduct a needs assessment, define project scope, research relevant technologies, and iteratively develop and test the prototype, engaging clients for feedback
- Followed experimental protocols for growth medium preparation, fungal inoculation, collection and filtration of fungal spores, sterilization, and compositional analysis to verify reproducibility
- Developed new experimental protocols to increase batch sizes from 1.5 to 100grams while increasing the protein content to at least 15% and optimizing resource consumption during fermentation
- Presented a prototype and poster board at the UC Davis College of Engineering Senior Design Showcase 2022 to outline the importance of reducing food waste through biological engineering processes

SKILLS

Computer-Aided Design: SolidWorks, AutoCAD, FastCAD
Programming Languages: R, Python, MATLAB, (Basic) Command Line
Technical Software: ArcGIS, OrCAD, COMSOL Multi-physics
Project Management Software: Git, GitHub, Trello, Dozuki, Click-Up, Slack, Discord, Zoom, Canva
Hardware: mill, lathe, band saw, drill press, laser cutter, sandblaster, powder coating, soldering, TIG and oxyacetylene welding, 3D printing
Safety Training: Autoclave Safety, Hazardous Waste Management and Minimization, Proper Handling of Materials at Biosafety Level 1, Biological Safety Cabinet, Fume Hood, Lockout/Tagout, and Electrical Safety