Amanda C. Ross, MSc. Biomedical Engineering

amanda.cm.ross@gmail.com | 408-340-3722 | www.linkedin.com/in/amandacmross

PROFESSIONAL SUMMARY

Biomedical Product Development Engineer passionate about impactful innovation at the intersection of design, engineering, and health equity. Experienced in early-stage prototyping, identifying clinical needs, interdisciplinary collaboration, and user-centered R&D. Proven success leading medtech projects with UCSF surgeons, industry teams, and underserved communities. Combines technical rigor, creative vision, and strong communication to drive solutions that are novel, effective, and scalable.

EDUCATION

San Jose State University — M.S. Biomedical Engineering
December 2021 | GPA: 3.5
Relevant Coursework: Medical Device Principles, Orthotics & Prosthetics, Biomedical Manufacturing, Regulatory & Clinical Affairs, Design Methods, Physiology for Engineers

University of California, Santa Cruz — B.A. Film & Digital Media | B.A. Visual Arts
Minor: Technology & Information Management
June 2015 | GPA: 3.6

EXPERIENCE

Freelance CAD Engineer – *Various Clients, San Jose, CA*
October 2023 – Present

- Delivered custom CAD designs and 3D printed prototypes for clients in consumer goods.
- Translated client concepts into 3D models, resolving form and function issues through iterative prototyping.
- Applied DFM principles, validated performance through hands-on testing, and refined designs based on user feedback.

Product Development Engineer – *Nordson Medical, San Jose, CA*
March 2021 – June 2023

- Assisted in execution of 5+ client medical device programs from concept through verification.
- Integrated customer research and clinical needs into product requirements and risk mitigation.
- Mentored summer interns in quality documentation and protocol development.
- Received Achieve and Inspire Awards for contributions to NPI and team leadership.

R&D Engineer – *NoLapse Pediatric Device Project (with UCSF surgeons)*
August 2020 – March 2022

- Co-developed an anti-stomal prolapse device in collaboration with UCSF pediatric surgeons.
- Secured over $130K in grants (STTR and Level-Up) and authored a 70-page thesis.
- Assisted in prototyping, animal studies, team management, and quality documentation.

Prototype Engineer – *Tortoise Beak Prosthesis Project, San Jose State University*
September 2021 - March 2022

- Designed a custom, two-piece, UV-resistant prosthetic for a Texas tortoise with chronic beak malocclusion.
- Used 3D printing, biocompatible materials, and magnetic components for field-ready application.
- Balanced anatomical constraints and caregiver usability in collaboration with caretakers and faculty.

Media Director – *David Cohen for San Jose City Council, District 4*
October 2019 – March 2020

- Produced campaign videos, promotional photography, and website contributing to a successful election.
- Built visual identity and handled multimedia strategy.

Research Associate – *Eisen Lab, UC Berkeley (E3S TTE REU)*
June 2018 – August 2018

- Conducted foundational research on intrinsically disordered transcription factors.

- Presented at SACNAS, the largest national conference supporting diversity in STEM.

Vice President – *SJCC Associated Student Government*
May 2018 – June 2019

- Led marketing and student access initiatives, including the $1 Tacos Affordable Food Initiative and Gym Access for All campaign.

Vice President – *SJCC Robotics & Automation Club*
September 2017 – June 2018

- Directed club programs such as 3D bioprinting workshops, robotics competitions, and AI forums.

Other Experience

- Product Ambassador & Engineering Intern – *SE3D, Bioprinting for Education*, 2017
- Photography Intern – *Museum of Art & History*, 2016
- Academic Coach & Instructor – *Extreme Learning Center*, 2015–2017
- 3D Modeling & Printing Instructor – *Galileo*, 2015
- Editing Director & Camera Support – *Rainbow TV*, 2014–2015
- Journalist & Art Director – *EyeCandy Film Journal*, 2014
- Volunteer Math Tutor – *Live Oak Family Resource Center*, 2014
- Rotoscoper – *Short Film, Last Day of Freedom*, 2013

AWARDS & RECOGNITION

- **Achieve Award** – Nordson Medical, 2023
- **Inspire Award** – Nordson Medical, 2022
- **Biomedical Engineering Program Service Award** – SJSU, 2022
- **Research, Scholarship, and Creative Activity Grant** – SJSU, 2021
- **ZinnStarter Accelerator Fellow** – AniTech, 2021–2022
- **Best Product Innovation** – Silicon Valley Innovation Challenge, 2021
- **UC Berkeley TTE Research Certificate**, 2018
- **Porter College Service Award** for ENTITLED, Art Exhibition– UCSC, 2015
- **Porter College Undergraduate Fellowships** – UCSC, March & May 2015
- **Creative & Innovative Grant** – UCSC, 2015
- **Porter College Fellowships in Film & Digital Media** – UCSC, February & May 2014

SKILLS

Hard Skills
SolidWorks (CSWA), Autodesk Inventor, AutoCAD, Blender, 3D Printing, Arduino, Instron Testing, Microscopy, FIJI/ImageJ, RStudio, JASP, Minitab, Adobe Creative Suite, Canva, Wix, Filmmaking, Photography, Copywriting

Soft Skills
Clinical Need Identification, Human-Centered Design, Rapid Prototyping, Grant Writing, Team Leadership, Cross-Disciplinary Collaboration, Communication, Creative Problem-Solving, Project Coordination