Daniel Yaming Shi

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Portfolio - danyamshi.github.io

Innovative biomedical engineer with extensive experience in medical R&D, data science, and preclinical research. Broad background in clinical, engineering, and regulatory facets, with expertise in mechanical engineering. Seeking R&D, Systems, and other product-facing engineering roles in MedTech.

Education

Master of Translational Medicine
UC Berkeley & UCSF - June 2025
(GPA 3.97)

B.A.Sc in Chemical Engineering
University of Toronto - June 2023
(GPA 3.86)

Skills & Expertise

Engineering
SolidWorks, AutoCAD, Fusion 360, Ansys Structural FEA, Ansys Fluent CFD, MS Project, DOE, DFM, FMEA, HFE/UE, Arduino

Programming
ML/AI, NLP, Python, Pytorch, C#, C++, SQL, HTML+CSS, MATLAB, Simulink, VBA, LaTeX, Unity

Data Science
MS Power BI, MS Azure Databricks, MS Power Automate, Minitab, Alteryx, MS Office, SAP BI, Statistics

Medical Device Knowledge
QMS, 21 CFR 820/ISO 13485, ISO 14971, IP, 510(K)+PMA, EHR, V&V, DHF, CAPA

Selected Experience

Research and Development (R&D) Engineer I   [08/2024 - 05/2025]
HydroShield | San Francisco, CA
- Developing a hydrogel injector to reduce off-target damage during thermal tumor ablation (UCSF-UC Berkeley startup)
- Applied mechatronics, linear actuator control, Fusion 360 prototyping
- Complied with QMSR for V&V and future Class II 510(k) submission

Graduate Student Instructor   [08/2024 - 05/2025]
UC Berkeley | Berkeley, CA
- Instructing 200+ students for MCB 32: "Human Physiology", and NEU C61: "Brain, Mind, and Behavior" 3 times a week
- Achieved teaching evaluations 8% above departmental average for teaching clarity and effectiveness

Digital Transformation Specialist   [05/2023 - 07/2024]
Johnson & Johnson (J&J) | Toronto, Canada
- Dissected 300K+ SAP orders to identify and reduce manual steps by 20% via Python, SQL, Azure Databricks
- Built 8 Power BI dashboards to track SAP/Salesforce KPIs to enable real-time analytics for the business

Exchange Researcher - Biohybrid Muscle Robot   [05/2022 - 08/2022]
ETH Zurich - Soft Robotics Lab | Zurich, Switzerland
- Investigated volumetric 3D bioprinting to manufacture contractile thin film muscles for biohybrid robots
- Applied additive biofabrication, electrical field stimulation, confocal imaging, and biomechanical actuation

Exchange Researcher - Total Artificial Heart   [05/2020 - 08/2020]
ETH Zurich - Functional Materials Lab | Zurich, Switzerland
- Developed a Class III artificial heart medical device prototype for HF
- 3D-modelled 40 geometries in SolidWorks and then simulated in Ansys Structural and Fluent to assess cyclic stress and blood stagnation areas

Notable Awards

- MTM Excellence Scholarship (25,000 USD) **(2024)**
- ETH Zurich Exchange Scholarship (7,500 CHF) **(2022)**
- ZKS Foundation Summerschool Exchange Grant (2,940 CHF) **(2022)**
- ThinkSwiss US Embassy of Switzerland Scholarship (5,400 CHF) **(2022)**
- University of Toronto International Experience Award (6,000 CAD) **(2022)**
- Featured on UToronto's website: https://chem-eng.utoronto.ca/news/cheme-future-leader-daniel-shi/ **(2021)**
- Ontario P.Eng. Foundation Undergrad Scholarship (1,500 CAD) **(2021)**