

Bryce Rogers

Multi-disciplinary engineer committed to thoughtful technology development

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Brooklyn, NY

WORK

PROCESS ENGINEER

2023 - present

TômTex | Brooklyn, NY

- Design and build electromechanical systems to automate and scale up in-house processing of shrimp-shell-derived textile; scale up from 3' sheets to 20' rolls achieved thus far

MECHANICAL ENGINEER

2024

CarbonBridge | Newark, NJ

- Developed bioreactor+fluid control system that enabled startup's first consistent+measurable production of bacterial methanol
- Designed and manufactured second system that scaled up in-lab production by ~10x

LEAD BIOMECHANICAL ENGINEER

2023 - 2024

Edge Foods | Manhattan, NY

- Led hardware development for mammalian cell fermentation startup, e.g. bioreactor with integrated sensors and feedback and device that encapsulated cells in hydrogel beads
- Designed+executed downstream processes (filtration, concentration, drying) to prepare protein product samples for delivery to ~10 potential customers
- Developed technoeconomic model that informed lab, pilot, and commercial scale planning

BIOMECHANICAL RESEARCHER

2020 - 2022

University of Southern California | Los Angeles, CA

- Solely accountable for simulated data on two papers coauthored under Dr. Niema Pahlevan investigating fluid-solid dynamics of compliant vessels
- Automated the generation, execution, and postprocessing of 100+ aortic bloodflow simulations using Matlab, CFD software, and Windows Command Line

ASTROBIOLOGY RESEARCH ASSISTANT

2017 - 2018

NASA Ames Research Center | Moffett Field, CA

- 3D modeled and tested efficacy of collection cones designed to gather Enceladus plume debris for ELSAH mission proposed by Dr. Christopher McKay

SKILLS

Computer-Aided Design

Solidworks, NX, Fusion 360, AutoCAD, FreeCAD, SketchUp, Inkscape

Fabrication+Prototyping

3D printing, laser cutting, 3 axis CNC, shop equipment, plasma cutting

Data Analysis+Visualization

Matlab, Mathematica, Python, Excel, Github

CFD+Other Simulation

ADINA, OpenFOAM, Simulink

Electronics+Controls

Arduino, Raspberry Pi, NI LabVIEW, PID design, Command Line

Mammalian cell culture

Freezing, thawing, centrifugation, passaging, suspension adaptation

Bioprocess Design

Suspension bioreaction, protein filtration+concentration, freeze drying

Technoeconomic Analysis

Spreadsheet models for process economics and scale up

EDUCATION

B.S. MECHANICAL ENGINEERING, 2022

University of Southern California | Los Angeles, CA

3.92 GPA, Summa Cum Laude

Half Century Trojans Scholar, Boeing Viterbi Scholar, Scion Scholar

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