

Joshua Chuah

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Biomedical Engineering Graduate Student

Biomedical Engineering graduate student with experience in statistical modeling, image processing, and microfluidic prototyping. My goal is to use data analytics and machine learning algorithms to automate current healthcare protocols such as diagnostic tests and drug quality testing. I have a strong desire to use my knowledge to help peers and future scientists grow, and am interested in a career in teaching.

Key Skills Include:

- MATLAB
- Mammalian Cell Culture
- Micro-CT Image Processing (PuTTY)
- Microfluidic Prototyping (PDMS)
- 3D CAD Modeling (Autodesk Inventor)
- R Programming Language

Education

Stony Brook University, Stony Brook, NY **May 2020**

Bachelor of Engineering, Biomedical Engineering and Applied Mathematics (Dual Degree)

GPA: 3.85/4.0

Awards: CEAS Dean's Scholarship, Presidential Award, Dean's List (8 Semesters)

Member: Alpha Eta Mu Beta honor society and the Biomedical Engineering Society

Publications

Chuah, Joshua R. et al. (2018, October). [Analyzing Maternal Metabolic Profile to Predict Neonate Autism Spectrum Disorder Risk](#). Biomedical Engineering Society (BMES) conference, Atlanta, GA.

Experience

Rensselaer Polytechnic Institute

Graduate Student: Teaching Assistantship

August 2020-Present

- Created and graded homework assignments
- Explained students concepts during and outside of office hours
- Helped teach programming courses and bioinstrumentation courses.

Rensselaer Polytechnic Institute

NSF-Funded Research Experience for Undergraduates | Research Assistant

May 2018 - August 2018

- Performed statistical analyses and developed algorithms in Matlab for large clinical datasets
- Developed a model to predict autism risk based on maternal metabolic profile
- Research results were presented at the National Biomedical Engineering Conference

Stony Brook University

Undergraduate Research | Research Assistant

Microfluidics lab

September 2018 - May

2019

- Maintained adherent mammalian cell cultures
- Developed Polydimethylsiloxane (PDMS) prototype sections for cell culture
- Built microcontroller prototype to maintain favorable conditions during experiments

**Computational Biomechanics lab
2020**

September 2019 - May

- Created scripts to perform efficient micro CT image data analysis
- Analyzed effect of ultrasound treatment on osteoarthritic bone

**Teaching Assistant | Calculus II
2017**

September 2017 - December

- Lectured to class sizes of over 100 students
- Held office hours for tutoring