Vivian H Su

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Education

Stony Brook University, Stony Brook, NY GPA: 3.44

B.E. Engineering Science – Specialization in Biotechnology; Minor in Nanotechnology Studies *May 2022*

Awards and Honors: Presidential Scholarship and Dean's List

Skills

Technologies

Autodesk Inventor, Autodesk Fusion 360, 3D Printing, Design-Expert, Minitab, ImageJ, Microsoft Excel

Relevant Experiences

Additive Manufacturing Intern *Boeing Research & Technology at the Boeing Company* *Summer 2021*

- Analyzed inspection data from 500+ part layers to develop an improved defect detection algorithm for Fused Filament Fabrication (FFF) manufacturing

Process Development Engineering Co-Op *Boston Scientific Corporation* *Spring 2021*

- Computed three statistical models using Design-Expert to evaluate key process inputs and optimized outputs
- Conducted root cause analysis to support validation process using Fishbone diagram to reduce business risk
- Modeled 5S fixtures using SolidWorks for various processes to promote ergonomics on production line

Operations Team Lead *iCREATE at Stony Brook University* *Fall 2018 – Fall 2020*

- Diagnosed 10+ Ultimaker and TAZ 3D printers for quality assurance of self service and queue prints
- Initiated Beginner Autodesk Inventor and Fusion 360 workshops and hosted weekly Ultimaker Cura trainings

Biodesign Intern *Sinai BioDesign at Mount Sinai Hospital* *Winter 2020*

- Advanced computational base for cranioplasty alternative by designing and simulating 3+ models on Fusion 360

Projects

3D Printed Transparent Masks for Visual Communication *Summer 2020*

Stony Brook University Department of Materials Science and Chemical Engineering/iCREATE at Stony Brook University

- Guided team of undergraduate students with operating Fusion 360 to model 7 distinct mask designs
- Computed air velocities and pressures of 2D and 3D mask simulations using COMSOL Multiphysics

Optimizing Configurations for Intracranial Pressure

Sinai BioDesign at Icahn School of Medicine at Mount Sinai Hospital *Winter 2020*

- Produced 3+ multiscale simulations using Fusion 360 to determine optimal configurations for medical model
- Varied geometric parameters and assigned material properties to analyze stress, strain, and displacement

The Influence of Exposure to Nanostructures on Dental Pulp Stem Cells: TiO2 Nanoparticles and Collagen Fibers

Stony Brook University and Stony Brook School of Dental Medicine *Spring 2018*

- Investigated the impact of titanium dioxide (TiO2) nanoparticles in the oral cavity using dental pulp stem cells
- Compared cell proliferation, morphology, bacterial sensitivity, and substrate effects of samples

Additional Experiences

REU *Garcia Center for Polymers at Engineering Interfaces at Stony Brook University* *Summer 2019*

Research Trainee *Icahn School of Medicine at Mount Sinai Hospital* *Summer 2018 and Winter 2019*

Teaching Assistant for Engineering Laboratory *Stony Brook University* *Fall 2020*

Teaching Assistant for Biomaterials *Stony Brook University* *Spring 2020*

Teaching Assistant for Introductory Biology Laboratory *Stony Brook University* *Fall 2019*

Leadership

President *Stony Brook University Taiwanese Students Association* *Fall 2020*

- Delegated tasks among 20+ cabinet members to execute cultural events and meetings with a $7,000 budget

Treasurer *Stony Brook University Taiwanese Students Association* *Fall 2018 – Spring 2019*

- Oversaw more than $6,000 of the organization's budget for a year of events, fundraisers, and meetings