

Brenton Svacha

57572 Suffield Dr., Washington, MI, 48094

dbsvacha@yahoo.com | Cell: 248-836-7492

LinkedIn: <https://www.linkedin.com/in/david-svacha-4ba9b02a9/>

Website: <https://teal-rugelach-13a7f1.netlify.app/>

SUMMARY

Student with engineering-based research and relevant coursework seeking to start a career in the biotechnology sector.

EDUCATION

University of Michigan, Ann Arbor, MI <i>M.S.E. in Biomedical Engineering</i> <i>Concentration: Biotechnology and Systems Biology</i>	<i>September 2023 – May 2024</i> <i>GPA: 3.98</i>
University of Michigan, Ann Arbor, MI <i>B.S.E. in Biomedical Engineering</i>	<i>September 2019 – April 2023</i> <i>GPA: 3.38</i>

RELEVANT COURSEWORK

CANCBIO 554: The Science of Cancer	<i>January 2024 – April 2024</i>
BIOMEDE 561: Microbio- and Nanotechnology	<i>January 2024 – April 2024</i>
EECS 414: Intro to MEMS	<i>September 2023 – December 2023</i>
CHE 517: Biopharmaceutical Engineering	<i>January 2023 – April 2023</i>

APPLICABLE SKILLS

scRNAseq Conversion · NGS · ISO 9001/13485 · Convolutional Neural Networks
ML Decision Trees · Signal Processing · Time Management · FDA Protocol · Problem Solving
FMEA · Leadership · Risk Analysis · Project Coordination · Patent Compliance · Innovation
Bioinstrumentation · Mechanical Analysis · CAD · Basic Circuitry · Quick Learner

RELEVANT PROJECT/RESEARCH EXPERIENCE

University of Michigan, Ann Arbor, MI
Systems Biology Lab – Drug-combinatoric ML Refinement *January 2024 – September 2024*

- Partnered and collaborated with a small team of postdocs and graduate students to refine a drug-combinatoric discovery machine learning algorithm for a particular use
- Instructed lab/research-based individuals on how to use revised program
- Processed Next Generation Sequencing (NGS) data, scRNAseq data, utilized genomic databases and utilized transcriptomic data to train model

Multisensory Perception Lab – iEEG Signal Processing *May 2023 – December 2023*

- Partnered and collaborated with a small team of professionals from LSA and the Medical School to refine signal processing methods to identify repeating shapes in iEEG data
- Instructed lab/research-based individuals on how to use program
- Learned machine learning algorithms which find patterns between various time segments of iEEG data

CHE 517 – Cell-sorting Using R *January 2023 – April 2023*

- Partnered and collaborated with a small team to formulate and test a hypothetical drug
- Utilized various cell-sorting algorithms in R, such as UMAP

BME 450 – Adjustable Friction Device for Deep Trendelenburg *January 2023 – April 2023*

- Partnered with a small team to design a clamp system meant to assist patients in the deep Trendelenburg position from slipping off an operating room table, preventing injury
- Worked with medical professionals from the University hospital to gain appropriate knowledge and insight into our problem to generate a problem statement
- Researched and simulated our clamp model using COMSOL and CAD, following FDA guidelines and design protocol

BME 332 – Designing Auxetic Materials for Better Osteointegration *January 2023 – April 2023*

- Partnered with a small group of students to design and 3D print materials with auxetic properties meant to promote osteointegration in spinal implants
- Tested SLA 3D prints for various mechanical properties in the Biomechanics Lab

BME 350 – CAD Modeling to Create Hip Implant. *September 2022 – December 2022*

- Worked with a small group to create an FDA-approved hip implant
- Planned, designed, and assembled a prototype of a hip implant using 3D printing and SOLIDWORKS

BME 458 – Arthritis-Assisting Computer Mouse *January 2022 – April 2022*

- Worked with a small group to create fully functioning computer mouse
- Planned, designed, and assembled a computer mouse which utilizes small EMG signals in key areas of the forearm to function

COMPUTER SKILLS

Computer: MATLAB, C++, C, CSS, Python, R, HTML, SQL, Bash, LabView, COMSOL, SOLIDWORKS

Operating Systems: Windows, macOS, Linux