Nick Grosenbacher

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Education

The Ohio State University Columbus, Ohio
BS Computer Science and Engineering *GPA: 3.85* Expected Graduation: December 2019

Experience

The Ohio State University Comprehensive Cancer Center Columbus, Ohio
Pelotonia Undergraduate Research Fellow August 2017 — Present
The Ohio State University Department of Biomedical Informatics Columbus, Ohio
Student Intern May 2016 — August 2017

- Conduct independent cancer research investigating genetic factors impacting drug sensitivity
- Assist ongoing projects with *in silico* and *in vitro* experiments with a focus on biomarker discovery
- Utilize data visualization techniques, survival analysis, clustering, differential expression to answer biological questions
- Identified potential biomarkers to indicate sensitivity to an experimental drug in endometrial cancer

University of Utah via National Cancer Institute Salt Lake City, Utah
Cancer Systems Biology Consortium Undergraduate Research Fellow June 2017 — August 2017

- Developed pipeline in Python/R to visualize and identify associations between gene expression and DNA copy number in cancer
- Analyzed associations in silico between mutation patterns and gene expression in breast cancer
- Presented poster at CSBC Undergraduate Research Conference at the National Institutes of Health

Coursework & Skills

Coursework Topics:	In progress: Artificial intelligence, operating systems, web applications
	Completed: Object-oriented programming, algorithms and data structures, low-level programming and assembly, bioinformatics, statistics, circuit design, technical communication
Languages and Tools:	Java, C++, C, R, Python, Git, SVN, Unix, Bash, HTML/CSS, LaTeX, MATLAB, Microsoft Excel

Projects

Project | *Copy-Number Variation–GSEA Correlation Tool* July 2017 — August 2017
- Open source tool written in R used to identify correlations between amplified DNA regions and gene set expression across large groups of patients
- Utilized parallel processing to efficiently calculate statistics from large datasets
- Implemented interface written in Shiny to provide an informative and interactive GUI

Poster | *In Breast Cancer, Mutation Signature 30 is Most Prevalent in the Luminal A Subtype* July 2017
- Identified gene signatures associated with a rare pattern of mutation found in breast cancer
- Presented at Cancer Systems Biology Consortium Undergraduate Research Conference, Bethesda, MD

Poster | *Stem Cell Markers as Predictive Biomarkers for MLN0128 Sensitivity in Endometrial Cancer* August 2016
- Discovered gene signature linked to sensitivity to an anticancer drug in endometrial cancer cell lines
- Presented at Ohio State Dept. of Biomedical Informatics Internship Poster Session, Columbus, OH

Awards and Honors

Pelotonia Undergraduate Research Fellowship August 2017 — May 2018
Awarded to perform cancer research as an undergraduate student *Mentors: Drs. James Chen, John Hays*
Cancer Systems Biology Consortium Undergraduate Fellowship June 2017 — August 2017
Awarded to perform cancer research as an undergraduate student *Mentor: Dr. Andrea Bild*
The Ohio State University Maximus Scholarship 2015 — Present
The Ohio State University Dean's List 2015 — Present

Activities

The Ohio State University Jazz Lab Ensemble Autumn 2017 — Present
The Ohio State University Athletic Band Autumn 2015 — Present
The Ohio State University Green Engineering Scholars 2015 — 2017