Ben S. Duggan

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RESEARCH EXPERIENCE

Leah Menshouse Springer Summer Opportunities Program, Washington University, St. Louis, MO ● maherlab.com
Summer research program giving undergraduates and medical students hands on cancer research experience.
Undergraduate researcher, June – August 2019
- Worked in Dr. Christ Maher's lab developing a pipeline to predict neoantigens from colorectal cancer DNA sequences and analyzed the results to understand the heterogeneity.
- Received wet lab training in Dr. Ryan Fields lab in basic cell culturing and their tumor on a chip device.

Dr. Paul Macklin, Indiana University Bloomington, Bloomington, IN ● mathcancer.org
Using mathematical models to make data-driven, agent-based computation models of cancer cells.
Undergraduate researcher, August 2018 – Present
- Created a mathematical and computational model of leader(K14)-follower interactions on the extra cellular matrix
- Developed software to easily *ad hoc* automated distributed parameter testing on a custom tool-chain

Dr. Kimberly Rosvall, Indiana University Bloomington, Bloomington, IN ● indiana.edu/~krosvlab/
Identify genomic and physiological mechanisms behind adaption and plasticity by studying Tree Swallows.
Undergraduate researcher, August 2017 – Present
- Created an open-source system for wirelessly collecting, monitoring and analyzing RFID data.
- Developed analysis tools that helped filter, find frequency of visit and display data about the reads.
- Maintained current RFID system and helped to assemble, deploy and plan the logistics for their new readers.

WORK EXPERIENCE

Practical Anatomy and Surgical Education (PASE), Saint Louis University, St. Louis, MO
PASE provides surgical training to physicians on new surgical procedures and equipment using cadavers and lectures.
Student Worker, May – August 2017
- Ensured each station had a tool tray made up with the equipment specified for that lab
- Answered questions of physicians and medical sales representatives and assisted them as necessary
- Setup and put away cadavers and tools for sessions

Midwest Pool Management, Maryland Heights, MO ● midwestpool.com
Providing lifeguarding service to public and private pools of all size.
Manager, May 2016 – August 2016, May – August 2017
- Managed aquatic facility and primarily responsible for facility cleanliness and the safety of patrons and staff
- Supervised twenty lifeguards and worked with city leaders in Parks and Recreation to ensure facility upkeep and safety
- Performed first aid, managed chemicals, evaluated new rules, trained staff and ensured pool cleanliness
Lifeguard, May – August 2014 and May – August 2015
- Ensued patron safety and rule enforcement
- Cleaned facility and performed first aid and aquatic rescues

EDUCATION

Indiana University Bloomington, Bloomington, IN.
Bachelor of Science in Computer Science ● Minor in Chemistry and Mathematics ● Premed track ● August 2016 –May 2020
- GPA: 3.935/4.0

SKILLS

- Proficient in HTML5, CSS3, JavaScript, Java, Python, C++, Git, L^AT_EX & data structures
- Skillful with R, AI, agent-based modeling, Node.js, HPC, MySQL and building Arduino & Raspberry Pi projects

AWARDS & ACTIVITIES

- Dean's List for the School of Informatics and Computing ● Fall 2016 - Present
- Founders Scholar in the School of Informatics and Computing ● Fall 2016 - Present
- Indiana University Honors Collect Research Partnership Grant ● $3000 ● Summer 2018
- Indiana University Research and Teaching Preserve Grant ● $966 ● Spring 2018 – Spring 2019
- Phi Delta Epsilon Pre-Medical Fraternity ● *Historian/Webmaster* ● Fall 2017 – Present
- Member of the Hutton Honors College ● Spring 2017 – Spring 2019
- Indiana University Swim Club ● Fall 2016 – Spring 2017