Daniel Liu

(734)-585-4865 danlliu@umich.edu

Education

University of Michigan — Ann Arbor, MI
College of Literature, Science, and the Arts
B.S. in Chemistry — Expected May 2023

College of Engineering
B.S.E. in Computer Science — Expected May 2023
Current GPA: 3.9

The University of Toledo — Toledo, OH
Dual enrollment with Ottawa Hills High School
through the College Credit Plus program. — 2016-2019

Ottawa Hills High School — Ottawa Hills, OH
Graduated Summa Cum Laude
Weighted GPA 4.78 — 2015-2019

Work Experience

EECS Instructional Aide — University of Michigan
for EECS281 and EECS370 — Fall 2020 – present
(20 hours / week, 40 hours / week during spring term)

Mathematics tutoring with the Comprehensive Studies Program — University of Michigan
for MATH105, MATH115, MATH116, and EECS203 — Fall 2019 – Winter 2021
(10 hours / week)

One-to-one chemistry tutoring with peers — University of Michigan
Fall 2019

Mentored two high school students through ACS Project SEED — The University of Toledo
Stuart Wells – St. Francis De Sales High School, Toledo, OH — June-August 2019
Reece Tatchell – Northview High School, Toledo, OH

Chemistry tutor for college students — The University of Toledo
2016 - 2018

Research Experience

University of Michigan, Ann Arbor, MI — September 2019 – present
Department of Chemistry
Advisor: Dr. Melanie Sanford

The University of Toledo, Toledo, OH. — March 2017 – August 2019
Department of Chemistry and Biochemistry
Advisor: Dr. Michael Young

The University of Toledo, Toledo, OH. September 2017 – May 2018
Department of Mathematics
Advisor: Dr. Ekaterina Shemyakova

Publications

- Kapoor, M.; **Liu, D.**; Young, M. C. "Carbon Dioxide Mediated C(sp3)–H Arylation of Amine Substrates." *J. Am. Chem. Soc.* **2018**, *140*, 6818-6822.
- **Liu, D.**; Kapoor, M.; Kennedy, J. F.; Young, M. C. "Carbon Dioxide Mediated ortho C–H Halogenation of Free Benzylamines." *2018 Ohio Inorganic Weekend poster presentation*, November 8, 2018, Ohio University, Athens, OH.
- Kapoor, M.; Chand-Thakuri, P.; Maxwell, J. M.; **Liu, D.**; Zhou, H.; Young, M. C. "Carbon Dioxide-Driven Palladium-Catalyzed C–H Activation of Amines: A Unified Approach for the Arylation of Aliphatic and Aromatic Primary and Secondary Amines." *Synlett* **2019**, *30*, 519-524.
- Young, M. C.; Djernes, K. E.; Payton, J. L.; **Liu, D.**; Hooley, R. J. "Resorcin[4]arenes: A Simple Scaffold to Study Supramolecular Self-Assembly and Host:Guest Interactions for the Undergraduate Curriculum." *J. Chem. Ed.* **2019**, *96*, 4, 781-785.

Honors and Awards

The University of Michigan:

- Summer Undergraduate Research Program Fellowship ($5000 / 10 weeks, chemistry research with Dr. Sanford) Funding provided by the Margaret & Herman Sokol Award — Summer 2020
- Invitation to Tau Beta Pi, National Engineering Honor Society — January 2021
- Dean's List — 2020

The University of Toledo:

- Biochemistry Award, Department of Chemistry and Biochemistry — 2019
- Physical Chemistry Award, Department of Chemistry and Biochemistry — 2018
- University of Toledo President's Honor List with GPA 4.0 — 2017-18
- Organic Chemistry Award, Department of Chemistry and Biochemistry — 2017
- Lim Sup Award: Outstanding Achievement in Mathematics — 2017
- Certificate of Pi Mu Epsilon, National Honorary Mathematics Society, Ohio Gamma Chapter for Superior Achievement in the Field of Mathematics — 2016
- Certificate of Outstanding Achievement in Chemistry from Department of Chemistry and Biochemistry — 2015

National Competitions:

- U. S. National Chemistry Olympiad High Honors (top 50) — 2019, 2018
- Qualification for AIME I — 2018, 2016
- AMC12 Honor Roll — 2018, 2016
- AP Scholar with Distinction Award — 2017
- White House Science Fair 2016 Participant — 2016

Ottawa Hills High School:

- National Merit Finalist 2019
- The Phillip W. Longenecker Science Award 2019
- Senior Mathematics Award 2019
- AP Biology Certificate of Honor 2017
- The Tom Docis Phenomenal Physics Award 2016
- AP Calculus Certificate of Honor 2016
- Outstanding Academic Performance in Science 2016
  (Educational Service Center of Lake Erie West)
- AP Statistics Certificate of Honor 2015
- High Honor Roll 2015-2019

Skills:

- Programming Languages: C++, C, Swift, Python, HTML/CSS/JS, command prompt
- Front-end Frameworks: React.js, Vue.js, Bootstrap
- Operating Systems: MacOS, Windows 10
- Software: Git, Microsoft Office, ChemDraw, MestReNova, MATLAB, Xcode, Gaussian