Suliman Sharif

Website: www.sulstice.dev **Github:** https://github.com/Sulstice/ **Email**: sharifsuliman1@gmail.com

B.Sc. Biochemistry Minor Computer Science/Business, University of Texas at Austin — **Austin, TX**
M.Sc. Organic Chemistry, University of California, Riverside — **Riverside, CA**
Ph.D. Candidate Pharmaceutical Sciences, University of Maryland, School of Pharmacy — **Baltimore, MD**

INDUSTRY

L7 Informatics — **Austin, TX**
Bioinformatics Scientist/Lead QA Engineer/Lead Scientist/Junior Devops Engineer — *July 2017 – Aug 2020*

- Automated scientific workflows for various industries (ex. Gene and Cell Therapy, Sample Barcoding, Fume Hood Real-Time Data Analysis) along the drug pipeline with 21 CFR part 11 Compliance.
- Python, Vagrant, VueJS, Jenkins, Cypress, Azure, Terraform, Docker, GraphQL, Jira, PostGresSQL, Zendesk, Git, Plotly, Bokeh

Macromoltek — **Austin, TX**
Software Engineering Intern — *May 2016 – Aug 2016*

- Developed a protein viewer for antibody analysis and modification tools for their customer web portal.
- BiasMV, JQuery, GruntJS, RequireJS, Turbogears, SVN, WebGL

MD Anderson Cancer Center — **Houston, TX**
Medicinal Chemist Intern — *May 2015 – Aug 2015*

- Modified existing potential therapeutics to improve liver clearance for bromodomain receptors.
- NMR 600 MHz with Robot Arm, HPLC, Mass Direct, Autocolumns, Liver Enzyme Analysis.

ACADEMIC

MacKerell Group, University of Maryland School of Pharmacy — **Baltimore, MD**
Ph.D. Candidate — *Aug 2020 – Est. June 2023*

- Thesis Title: Balancing the Van Der Waals Force
- Software: Python, Plotly, AWS, Psi4, CHARMM, NAMD, FORTRAN, Git, Stampede2, XSEDE, SLURM, Github, Neo4j, Graph Databases, Plotly, RDKit, Github Org, Bokeh, Keras, TensorFlow, NeuPy, SciPy. Github Actions/Discussions/Projects.
- Science: Molecular Dynamics, Condensed-Phase Thermodynamics Calculations, Free Energy Perturbation, Monte Carlo.

Humphrey Group, University of Texas at Austin — **Austin, TX**
Undergraduate Student Researcher — *Apr 2015 – Aug. 2016*

- Designed, Synthesized Bidentate Phosphine ligands for Metal Organic Frameworks to separate meta, ortho from para. xylene.
- Used Schrodinger Glide Engine to perform Docking Studies on estimated ligand insertion into Biphenyl Cages
- NMR 600 MHz, Power Pattern, X-Ray Crystallography

May Group, University of Houston — **Houston, TX**
Undergraduate Student Researcher — *Jun 2014 – Aug. 2014*

- Synthesized Analogues of Bisindole Compounds Biomimetically For Enhancing Biological Activity.

OPEN SOURCE

Global-Chem
Founder/Maintainer — *Aug 2019 – Present*

- Global-Chem: A General Public Dictionary of Common Chemical Names to SMILES | *Vol. 1. 15K Downloads Per Month, 160,000+ Downloads, 19+ Contributors.*

Uptime-Cheminformatics/Medical Informatics/Bacteria Informatics

- A HeartBeat Monitor to Check Uptime Status for Open Science Databases | *www.chemistrydb.com*, *www.bacteriadb.com*, *www.medicinedb.org*

Cheminformatics-Teaching

- A platform and tutorial for teaching undergraduate and graduate education a combination of organic chemistry and computer science | https://github.com/Sulstice/Cheminformatics-Teaching-Material

TEACHING

- **Organic Chemistry I & II Laboratory,** 24 Sections, *University of Texas at Austin*, **Austin, TX**
- **Organic Chemistry I & II Laboratory,** 8 Sections**,** *University of California, Riverside*, Riverside CA

PUBLICATIONS

- Orr, Asuka A., Sharif, Suliman. et al. "Preserving the Integrity of Empirical Force Fields." Journal of Chemical Information and Modeling, vol. 62, no. 16, Aug. 2022, pp. 3825–31.
- Sharif, Suliman. "Cocktail Shaker: An Open Source Drug Expansion and Enumeration Library for Peptides." Journal of Open Source Software, vol. 5, no. 52, Aug. 2020, p. 1992.

CONFERENCE TALKS

- **Cocktail Shaker: A Python Package for Chemical Library Building of Peptide Combinations and Enumeration in SMILES,** *RDKit UGM 2019 Conference*, July 2020
- **CGenFF Compass: A lexical dictionary bridge between SMILES to Atom Types,** *The International Society of Quantum Biology and Pharmacology*, June 2021
- **General Chemical Diversity Filter**, Co-Talk, *École Polytechnique*, June 2021
- **Using Python to Build a Chemical Knowledge Graph of IUPAC to SMILES**, *PyData Global*, October 2021
- **The Common Chemical Universe**, *Graduate Student Conference University of Maryland*, Feb 2022
- **How to Select Compounds for Force Field Parameterization that are most useful to different communities**, *International Society of Biocuration*, July 2022
- **The Pythonic Common Chemical Universe** *PyData Global*, Dec 2022
- **Global Optimization of the Off-Diagonal Lennard-Jones Parameters in the CHARMM Additive and Drude Force Fields**, *University of Maryland*, Internal Meeting.
- **Porting Global-Chem Knowledge Graphs into Neo4j,** *Nodes22,* Upcoming Jan 2023.
- **Balancing the Van Der Waals Force**, *American Chemical Society* Upcoming Spring 2023

AUTHORSHIP & AWARDS

- **Mozilla Open Science Grant,** *LifeSciHack*, 2019 $10,000
- **MeaningfulCode,** *Global-Chem, 2021*
- **U.S Copyright Issued Dec. 2022:** *Global-Chem: A dictionary of common chemical names to their molecular definition*, 150 Page Book

SOCIAL MEDIA EXPERIENCE

- **Reddit,** Moderator of Cheminformatics and Organic Chemistry, *2,000,000+ Views (DataIsBeautiful), 7000+ Likes,, 7 000 Karma*
- **Medium,** Cheminformatic/Computer Science/Lifestyle Blogger, *1000 Reads Per Month, 12000+ Reads Total*
- **Youtube,** Sulstice, Courses: Introduction to Cheminformatics
- **Twitter,** *2,163 Tweets, 60,000+ impressions*
- **Other Platforms:** IndieHackers, HackerNews, Instagram, TikTok

EVENTS HOSTED

- **LifeSciHack 2019 Bridging Software and Science Austin**, *Mozilla Foundation*, Wework, Feb 2019
- **LifeSciHack 2019 Bridging Software and Science London,** *MozFest,* Royal Society of Arts London, Oct 2019