Matthew R Masters

27 Sherwood Rd
Swampscott, MA 01907
MatthewRMasters@gmail.com
781-492-5257
matthewmasters.github.io

EDUCATION

Purdue University
West Lafayette, IN
Aug 2015 - May 2020

- Bachelor of Science in Pharmaceutical Sciences
- Minor in Computer Information Technology

Essex North Shore Technical High School
Danvers, MA
Sep 2011 - May 2015

- Honors and Advanced Placement courses in biology, physics, mathematics, and english
- 2000-hour Information Technology Systems course

Northeastern University
Boston, MA
Sep 2013 - Dec 2014

- 18 credit hours in Information Technology courses

EXPERIENCE

Undergraduate Researcher
Lill Lab at Purdue University
West Lafayette, IN
Oct 2017 - May 2020

- Learned about computer-aided drug design in an interdisciplinary and collaborative environment
- Worked on a variety of applied research problems, reviewed scientific literature, and devised research methodology
- Developed new tools and updated existing software

Senior Lab Assistant
Purdue University
West Lafayette, IN
Oct 2016 - May 2020

- Worked in a team environment to install and configure hundreds of Windows and Mac workstations
- Provided technical customer support to students and staff
- Managed and provided evaluations for a team of student workers

Web Designer
Carino Web Design
Swampscott, MA
Dec 2012 - June 2015

- Consulted individuals and small businesses to learn their web design needs
- Designed and built websites on the Wordpress content management system

Computer Technician
Staples Easy Tech
Salem, MA
July 2013 - June 2014

- Troubleshot technical issues related to operating systems, email, financial/database software, networking, and hardware
- Performed hundreds of virus and malware removals from infected personal computers

PUBLICATIONS

- Mahmoud, A. H., Masters, M. R., Yang, Y., & Lill, M. A. Elucidating the multiple roles of hydration for accurate protein-ligand binding prediction via deep learning. Nature Communications Chemistry (2020)

- Masters, M. R., Mahmoud, A. H., Yang, Y., & Lill, M. A. Efficient and Accurate Hydration Site Profiling for Enclosed Binding Sites. Journal of Chemical Information and Modeling (2018)

SKILLS

- **Pharmaceutical Sciences** - Spectroscopy and chemical analysis (IR, NMR, GC-MS), synthesis and purification of organic compounds, acid-base titration, column chromatography, electrophoresis, microscopy, microbiology techniques

- **Computational Biology** - Molecular dynamics (OpenMM, Amber), molecular docking (AutoDock, GOLD), visualization (PyMOL, VMD, NGL), chemoinformatics (RDKit, OpenEye), deep learning (DeepChem, gnina), sequence alignment (BLAST)

- **Programming Languages** - Python, C, C++, JavaScript (React, Node.js), PHP, MATLAB

- **Data Science** - Pandas, NumPy, Scikit-learn, PyTorch, TensorFlow, Matplotlib

- **Other Computer Skills** - Productivity tools (Office, GDrive), graphic design (Photoshop, Illustrator), cloud computing (AWS, GCP), Linux, Git, Docker, code debugging, profiling

- **Certifications** - CompTIA A+, Net+, Linux+, Cisco IT Essentials, CCENT, OSHA 10-hour

ACTIVITIES

- Kaggle Master, ranked 8th out of over 180,000 users in discussions tier

- Executive board member and webmaster of Cavalier Club

- Member of Association of Information Technology Professionals

- Member of National Honor Society and National Technical Honor Society

- Founded high school student newspaper and website, HawkSpan

AWARDS

- Outstanding Vocational Technical Student Award (2015)

- Information Technology Systems Work Ethic Award (2013)

- SkillsUSA - Gold Medal in Internetworking (2014)

- Cisco NetRiders - Round Two Winner (2013)

- SkillsUSA - Gold Medal in Web Design (2012, 2013)