

Dariusz Aligholizadeh

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Education

- Aug 2020 | **B.S. in Biochemistry & Molecular Biology, B.S. Computer Science**, University of Maryland, Baltimore County, GPA: 4.00/4.00, Member: Honors College, Baltimore, MD.
May 2024
- Sept 2016 | **Diploma**, Towson High School, GPA: 3.89/4.00, Rank 14/326 (top 10%), SAT: 1450 (99th percentile), Towson, MD.
May 2020

Research Experience

- Mar 2019 – **Researcher/Lab Manager**, Devadas Nanoparticle Research Lab, Towson University.
Present
 - First authoring paper on dendritic silver nanoplate synthesis
 - Second authoring paper on green synthesis of gold nanoplates
 - Trained on and worked with UV-Vis, IR, Fluorescence, SEM, NMR
- Oct 2020 – **Research Intern**, Rao Sensor Technology Lab, University of Maryland, Baltimore County.
Present
 - Helping on development of fast ELISA technique for cheaper and more accurate antigen detection
 - Still in training due to COVID restrictions
- Aug 2019 – **Research Assistant**, Walczak Neuroradiology Lab, Johns Hopkins School of Medicine.
Feb 2020
 - Worked on targeting of HIF1 protein and understanding its role in glioblastoma multiforme
 - Worked with ImageJ and other data analysis tools
 - Helped build convolutional neural network for cancer cell classification
 - Trained on and worked with CryoStat, compact MRI,
- Feb 2020 – **Research Assistant**, Walczak Neuroradiology Lab, University of Maryland School of Medicine.
Jul 2020
 - Moved from JHSOM to UMSOM with lab
- May 2020 – **Research Assistant**, Dinglasan Infectious Diseases Lab, Remote/Online.
Present
 - Independently develop software and programs for specific lab use
 - Developed database for quick Human ortholog lookup
 - Created chromatography graphing program with input of photo

Skills

Programming Languages Python, C/C++, JavaScript, Java

Software TensorFlow, PyTorch, OpenCV, React, ImageJ, CellProfiler

Lab Equip. UV-Vis, Fluorescence, IR, NMR, SEM

Math/Science OChem/Inorg. Chem, Biochem, Linear Algebra, Calculus

Outreach & Programming Projects

Torn MMO, *ReactJS*, *Node.js*, *WebSockets*.

Helped develop an online spaceship MMO

<https://torn.space/>

SIGN Web page, *ReactJS*.

Helped develop website for Society for Image-Guided Neurointerventions (SIGN)

<https://www.neurosignsociety.org/>

Towson University High School Outreach, *Chemistry Mentoring*.

Conducted outreach with the Devadas lab demonstrating nanoparticle syntheses and mechanisms to local High School students interested in science and chemistry

https://twitter.com/Devadas_GroupTU/status/1190414004285517826

Awards

USABO National Semifinalist, *May 2020*.

Made it to semifinalist (top 7% nationwide among 10,000+ competitors)

- USA Biolympiad

AP Scholar w/ Distinction, *2019, 2020*.

Received consistent high marks across all Advanced Placement exams

- Collegeboard

Colophon Literary Art Magazine Published Art, *2018, 2019, 2020*.

Photography and digital art (programmed) submitted and accepted to school's award winning literary art magazine

- Towson High School

Regional Chemistry Olympics 2nd place winner, *Feb 2018*.

Won second among 30+ teams in topics ranging from chemistry trivia to theoretical problems

- Baltimore County

Regional Physics Olympics 3rd place winner, *Feb 2019*.

Won third among 30+ teams in mathematical and Newtonian physics

- Baltimore County