John "J.D." Squire

(210) 649-7458 | jdsq2018@gmail.com | https://john-squire.github.io

I am a first-year medical student with a passion for engineering and medicine. By harnessing the power of the technology of today and of the future, I believe we can improve the quality of life for everyone around the globe. I am currently looking for research experiences that utilizes the power of technology to help advance healthcare.

Education

The Carle Illinois College of Medicine at the University of Illinois Urbana-Champaign, Doctor of Medicine
- Class of 2026: first-year medical student attending under the Air Force Health Professions Scholarship Program

The University of Texas at Dallas, Bachelor of Science in Biomedical Engineering
- Graduated Summa Cum Laude in 2022, recipient of the UTD Academic Excellence Scholarship, member of the Collegium V Honors Program

Skills and Proficiencies

- Clinical skills in primary care
- Research skills in cell culture, nanoparticle synthesis, and machine learning
- Java, Python, HTML, CSS, PHP, MATLAB, Arduino, and Microsoft PowerApps programming knowledge
- VEGAS Pro 15 video editing knowledge
- SolidWorks CAD and 3D printing knowledge

Work/Internship/Research Experience

Dec 2022 – present — **Graduate Researcher** at the Mobility and Fall Prevention Research Laboratory at UIUC
- Characterized cognitive and motor function in gait with the goal of developing objective and standardized diagnostic measures of motor impairment and treatment

Aug 2021 – Jun 2022 — **Undergraduate Researcher** at the Molecular Imaging and Optical Nanotherapeutics Lab at UTD
- Characterized various nanoscale drugs for head and neck cancers under light-activated, x-ray activated, and γ-ray activated conditions

May – Aug 2021 — **Premier College Intern** at the Air Force Research Laboratory
- Worked in the 711th Human Performance Wing in the Bioanalytics Section at Wright-Patterson Air Force Base in the Air Force Research Laboratory, focusing on toxicology research
- Utilized HTML, CSS, JS, PHP, Python, GUI development, and machine learning concepts

Jan – May 2021 — **Undergraduate Researcher** at the Molecular Radiation Biology Research Lab at UT Southwestern
- A research partnership between UT Dallas and UT Southwestern under the 2021 Green Fellowship
- Acquired imaging data in 3D tumor models for head and neck cancer as well as imaged and modeled time-dependent distribution of x-ray responsive nanoparticles in response to varying doses of radiation therapy
- Investigated the use of light-activatable nanotechnology as a facilitator for radiation therapy in radiation-resistant tumors of the head and neck

May 2020 – present — **Staff I IT Specialist** at MSE Group, LLC
- General IT management, EPA TRI Reporting, and electronic stormwater pollution prevention plan development in Microsoft PowerApps and PHP

Jan – Dec 2020 — **Undergraduate Researcher** at the Systems for Augmenting Human Mechanics Lab at UTD
- Learned about neural network architecture and building a neural network to identify diseases related to the hip joint

Jun – Aug 2019 — **IT Intern** at MSE Group, LLC
- General IT management, TCEQ Air Quality Permit submittal, promotional material designer and project outline editor for Electric Vehicles San Antonio, digitized company reference material

Jun 2018 – Jun 2019 — **Undergraduate Researcher** at the Speech Disorders and Technology Lab at UTD
- Clark Summer Research Program participant
- Developed MATLAB programs that connected speech data witch machine learning model

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Professional Affiliations

2022 **Phi Delta Theta Fraternity**
- **Media Chair** (2021-22)

2018 – 2022 **Worsfold Grant Selection Committee Member**
- Member of a group that selects student-led volunteer initiatives funded by the Worsfold Grant (https://honors.utdallas.edu/worsfold)

2018 – 2022 **Phi Beta Lambda (Future Business Leaders of America)**
- **Vice President of Marketing** (Texas PBL) (2020-22)
- **Fundraising Committee Chair** (UTD PBL) (2018-19)

2019 – 2022 **Society of American Military Engineers (SAME)**
- **Student Member**, recipient of the 2019 and 2020 San Antonio Post and Fort Worth Post scholarship

2020 **51st IEEE Semiconductor Interface Specialists Conference Staff**
- HTML, CSS, and PHP developer for virtual conference backend
- Facilitated live virtual research poster presentations

Community Service

Aug 2019 – Jun 2022 **Freshman Mentor Program at UTD**
- Introduced incoming first-year students to college life, including resources and study habits

2018 – 2019 **Society of American Military Engineers (SAME) Operation Float-a-Soldier**
- Volunteer event to provide a fun day to our wounded warriors at Canyon Lake, TX

Mar 2019 **Freshman Engaged in Service Together (FEST) at UTD**
- Created paracord bracelets to send to active duty military members and veterans

Jun 2015 – Aug 2015 **Boy Scouts of America Eagle Scout Project**
- Built mobile heavy-duty A-frame signs and replaced old signs for the First Tee of San Antonio

Publications

Shah N, Squire J, Guirguis M, Saha D, Hoyt K, Wang KK-H, Agarwal V, Obaid G. Deep-Tissue Activation of Photonanomedicines: An Update and Clinical Perspectives. *Cancers*. 2022; 14(8):2004. https://doi.org/10.3390/cancers14082004