Antonio Glenn

Curriculum Vitae
aglenn5@cs.washington.edu
Website: antoniog11.github.io/
LinkedIn: antonio-glenn-299004163
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Research Interests

Wearables, Mobile and Embedded Computing for Medicine, Machine Learning

Education

University of Washington — Seattle, WA
Ph.D. in Computer Science, advised by Prof. Shyam Gollakota and Prof. Shwetak Patel — Aug. 2022 –Present

Vanderbilt University — Nashville, TN
B.E. in Biomedical Engineering — Aug. 2016 –May 2020

Professional Experience

Vanderbilt University — Nashville, TN
Research Assistant, advised by Prof. Will Grissom — Jan. 2020 - Aug. 2022

- *Helping to End Addiction Long Term (HEAL) Project - Ultrasound Neuromodulation with FMRI*
- Helped construct a multi-coil shim array for MR imaging and ultrasound neuromodulation in Macaque primates.
- Wrote Matlab and python code to evaluate multi-coil shim array and perform B0 shim in image domain.
- Designed a multi-element head coil former for human brain MR imaging in Autodesk Inventor.
- Constructed open source shim current amplifier and enclosure to drive shim currents.
- Designed and constructed de-tuning circuit for bench testing of MR coil elements

Vanderbilt University — Nashville, TN
Undergraduate Research Assistant, advised by Prof. Michael King — Jan. 2018 - Aug. 2019

- *TRAIL-Coated Leukocytes to Kill Circulating Tumor Cells in Blood from Frozen Prostate Cancer Patients*
  - Produced TRAIL (TNF related apoptosis inducing ligand) coated liposomes conjugated to leukocytes to induce apoptosis in circulating prostate cancer cells.
  - Learned cell culture skills, cell viability assays, fluorescent microscopy, and data analysis.
  - Presented findings on this research at 2018 Vanderbilt Undergraduate Research Fair
- *Evaluating TRAIL Sensitization by Taxanes in 3D Tumor Spheroids Co-Cultures with Fibroblasts*
  - Oversaw the cell culture of multiple cell lines as well as the design, planning, and treatment of co-cultured cancer cells and fibroblasts with chemotherapeutics and TRAIL.
  - Analyzed flow cytometry data and fluorescent pictures from treatment of spheroid cultures with TRAIL and chemotherapy

GreenLight Medical, Inc. — Nashville, TN
Medical Device Clinical Research Intern — Jun. 2019 - Aug. 2019

- Procured and evaluated clinical evidence on the efficacy and safety of medical devices submitted through the cloud based GreenLight Medical Portal.
- Developed a python script that scraped numerous medical databases to automate the process of compiling clinical research on medical devices and increase the efficiency of the clinical research team.

Publications and Presentation

1 Justin Chan, **Antonio Glenn**, Malek Itani, Lisa R. Mancl, Emily Gallagher, Randall Bly, Shwetak Patel, and Shyamnath Gollakota. 2023. Wireless earbuds for low-cost hearing screening. In Proceedings of the 21st Annual International Conference on Mobile Systems, Applications and Services (MobiSys '23). Association for Computing Machinery, New York, NY, USA, 84–95. https://doi.org/10.1145/3581791.3596856

2 Sengupta S, **Glenn A**.Prospective Motion Correction at 3 Tesla with Wireless NMR Probes and Ultrashort Echo Navigators.ISMRM Motion Correction Workshop.

3 Multi-Coil Shimming for Magnetic Resonance Guided Focused Ultrasound Neuromodulation. **Antonio Glenn**. BMES 2021

4 Ortiz-Otero N, Marshall JR, **Glenn A**, Matloubieh J, Joseph J, Sahasrabudhe DM, Messing EM, King MR. TRAIL-coated leukocytes to kill circulating tumor cells in the flowing blood from prostate cancer patients. BMC Cancer. 2021 Aug 6;21(1):898. doi: https://doi.org/10.1186/s12885-021-08589-8. PMID: 34362331; PMCID: PMC8343922

Awards And Honors

- **Best Paper Runner Up Mobisys'23 — Wireless earbuds for low-cost hearing screening** 2023
- **Advancing Science in America (ARCS) Foundation Scholar** 2022 - Present
- **Jeff Dean - Heidi Hopper Endowed Regental Fellowship in Computer Science & Engineering** 2022
- **Vanderbilt Ingram Cancer Center Research Fellowship** 2018 - 2019

Teaching And Mentoring

Vanderbilt University Nashville, TN
National Science Foundation Stem Tutor Aug. 2018 - May. 2020

– Tutored Vanderbilt University students in subjects ranging from organic chemistry, circuits, differential equations, linear algebra, Matlab, and various biomedical engineering subjects.

Vanderbilt University Nashville, TN
Vanderbilt Student Volunteers for Science (VSVS) Jan. 2018 - Jan. 2020

– Taught weekly science lessons that educated elementary and middle school students on a wide range of STEM subjects.

– As team leader, I was responsible for driving fellow VSVS volunteers to the school where we taught, picking up necessary supplies for each lesson, and leading each stage of the lesson for the students.

Vanderbilt University Nashville, TN
V-Squared Mentorship Program Aug. 2017 - Aug. 2020

– Mentored and advised incoming first–year engineering students and helped to facilitate their transition into college and biomedical engineering

Skills

- **Programming Languages** - Python, C, Matlab
- **Computing Environments** - AVR Microcontrollers and embedded systems programming
- **Software** - Autodesk Inventor, Kicad