

DADMEHR DANIEL GHASEMFAR

Alexandria, VA
650.720.8415
danielghasemfar@gmail.com
www.danielghasemfar.com

OBJECTIVE

To utilize technical engineering knowledge, thorough design skill, mathematical and computational analysis, and effective communication, in collaboration with a team of subject-matter experts, towards the development of a high-quality and impactful product, service, or system. In other words – to solve difficult problems via optimal means.

EDUCATION

BS in Mechanical Engineering with Minors in Mathematics and Psychology – Duke University

Aug 2020 – May 2024

Relevant Courses – intro & intermediate robotics, intermediate dynamics, chaos and perturbation theory, control theory, heat and mass transfer, incompressible fluid dynamics, algorithms and data structures, ODE & PDE's, numerical analysis, intermediate solids and statics, aircraft performance and design

Honors – Pratt Research Fellow, Graduation with Distinction, Iranian Scholars Federation

3.48 Cumulative GPA → 3.56 Engineering Major GPA + 3.50 Mathematics Minor GPA + 3.0 Psychology Minor GPA

EXPERIENCE

Research Assistant – Duke General Robotics Lab

Aug 2022 – May 2024

Worked under Dr. Boyuan Chen with the goal of building a versatile and accurate FEA-style parallel-processed wave propagation simulation to generate artificial data for a novel A.I. that can “see with sound”. Created a novel Chladni plate test to connect simulated data to real life vibrational data. See website for the writeup of the work. Left due to graduation

Lab Technician – FPrin LLC

Oct 2020 – Feb 2021

Designed, built, and operated case-specific test setups to effectively characterize a novel and recently patented German compressed gas-powered insulin pen. Furthermore, designed and built a fully functional self-balancing RC PID controlled robot named Balanciaga. Left due to relocation.

Head of Circuit Design – Null Designs LLC

May 2020 – Sept 2020

Explored tactile and low-budget computer keyboard systems for a start-up that a high school friend founded right after graduation. Designed the underlying PCB using the ATMEGA-32 chip firmware as a base in Eagle. Tested numerous keys for ease-of-use and compatibility.

SKILLS

- CAD – SolidWorks, Fusion 360 and Autodesk
- FEA and CFD – Ansys and SolidWorks
- Milling and Lathing
- Python, Java, JavaScript, TensorFlow and C++
- Numerical Analysis and PDE Approximation
- PCB Design and Mechatronics
- CAS – Maple and Mathematica
- 3D Printing – SDF (8+ years), SLS, and Metal Sintering
- Laser Cutting and CNC Routing

ACTIVITIES

Cross Country Team Captain, Two Completed Marathon's, 24 Hour Design Sprint Winner, IIb Battle Robotics Competitor, Part-Time Calculus Tutor for 5+ Years, Three Time XC State Competitor, City of Mountain View Mayor Recognition and Medal for High School A.I. Study on Forest Fire Prevention, Two Time Synopsys Science Fair Finalist