

DADMEHR DANIEL GHASEMFAR

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EDUCATION

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

Aug 2020 – Dec 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, Two-Year Research Distinction, Iranian Scholars Federation

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

EXPERIENCE

Engineering Consultant – 3DA [thinktank] – Alexandria VA

August 2024 - Present

3 Darvazeh Argan Energy is an electronic solutions startup based in Iran. The founder, Siavash [Ali] Gholamhosseinpour, has 34 patents and 30+ years' experience in high energy Physics. Translated and edited the technical documentation of a new FDS, Low-Voltage Insulation Resistance and HiPOT Integrated Tester called SAARTRAP. Currently working on collecting sponsors and pooling investment to establish 3DA Energy in the US.

Research Assistant – Duke General Robotics Lab – Durham NC

August 2022 – May 2024

Worked under Dr. Boyuan Chen to build and develop a versatile and accurate FEA-style parallel-processed wave propagation simulation. This is used to generate artificial data for a custom A.I. that can “see with sound”. Created a novel Chladni plate test to connect simulated data to real-world vibration data. See website/portfolio for the writeup of the work. Left the lab after graduation.

Lab Technician – FPrin. LLC – San Jose CA

October 2020 – February 2021

Designed, built, and operated case-specific test devices to effectively characterize a recently patented compressed gas-powered insulin pen. Separately designed and manufactured a fully functional self-balancing RC PID controlled robot named Balanciaga. After that, stress tested thousands of components and maintained the machine shop and electronics lab. Left due to relocation from the Bay Area.

Senior Lead – GoBringIt [Duke University] – Durham NC

June 2022 – March 2024

Facilitated successful operations for Duke's GoBringIt food delivery, assisting with scheduling, logistics, and technical troubleshooting. On busy days, would manage and collect over two thousand dollars. Left after graduation.

Head of PCB Design – Null Designs LLC – Mountain View CA

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 EaglePCB. Tested numerous keys for ease-of-use and compatibility. Integrated the PCB and housing to manufacture a one-off custom keyboard for customers.

SKILLS

- CAD – SolidWorks, Fusion 360 and OnShape
- FEA and CFD – Ansys and SolidWorks
- Milling and Lathing
- Mechatronics and mid-size robot design
- Python, Java, JavaScript, TensorFlow and C++
- Numerical Analysis and PDE Approximation
- PCB Design
- CAS – Maple and Mathematica
- 3D Printing – SDF (8+ years), SLS (4+ years), and Metal Sintering
- Laser Cutting
- CNC Routing

ACTIVITIES

- Cross Country Mens Captain
- Two Completed Marathon
- 3x Cross Country States Competitor
- 2x Synopsys Science Fair Finalist [CS]
- City of Mountain View Mayor Recognition and Medal for A.I. study
- 35 ACT Score, 800 Math and Physics SAT
- 5+ years Calculus and Linear Algebra Tutor
- FRC Robotics Quarterfinals Competitor