

ARNAV DHAR

(949) 870-7484 | arnav.dhar@duke.edu | in/arnavkdhar

EDUCATION

Duke University

B.S. in Mathematics & Computer Science, Concentration in AI & Machine Learning
Minor in Financial Economics

Aug 2025 – Present
Durham, NC

- **Relevant Coursework:** Data Structures & Algorithms, Introduction to Machine Learning, Linear Algebra & Applications, Probability Theory, Introduction to Computer Systems
- **Honors:** HackDuke 1st Place · Duke Applied ML Senior Engineer · Duke Startup Showcase Top 10

Northwood High School

Cum Laude

Aug 2021 – Jun 2025
Irvine, CA

- **GPA:** 3.97/4.0 | **SAT:** 1560/1600 (Math: 800, Reading: 760)
- **Honors:** National Merit Finalist (merit & essay-based award), President's Volunteering Service Award Gold (300+ service hours), Science & Engineering Fair Finalist, President of Northwood Machine Learning Club

WORK EXPERIENCE

Sand Intelligence

Founder + CTO

Aug 2025 – Present
Durham, NC

- Secured and served a \$6K/mo AI automation contract with Ruchi New York, a fine jewelry brand with celebrity clientele
- Led a team of three to source, scope, and close the deal; built AI tooling for generative jewelry design from gemstone photos and personalized client recommendations

Protect3d

AI & ML Intern (Paid)

Jan 2026 – Present
Durham, NC

- Built a novel multi-stage cascaded XGBoost pipeline predicting custom orthotic design parameters from 3D foot scan landmarks; replaced manual clinical measurements with automated ML inference, achieving ~3% average prediction error
- Pipeline adopted across PROTECT3D's product line, now powering slider prediction for multiple equipment designs

Tim Duong Research Laboratory, Albert Einstein College of Medicine

AI Researcher

May 2024 – Aug 2025
New York, NY (Remote)

- Developed AI model predicting Mild Cognitive Impairment progression to Alzheimer's with 88% accuracy
 - Currently completing undergraduate thesis under Dr. Duong for LLM-based neurodegeneration prediction
- Co-developed a personalized breast cancer treatment model with 83% accuracy, published in National Library of Medicine
- Created Standard Operating Procedure for accessing cloud VMs, now used by 150+ lab members

Cognitive Synergy Corporation

AI & ML Research Intern

Aug 2023 – May 2024
San Diego, CA

- Engaged in drug discovery research applying AI & ML techniques to automate, predict, & discover new drug candidates for Central Nervous System related disorders using the AlphaFold database
- Co-authored paper pending publication in the Journal of Neuroscience discussing the pharmacokinetics & brain penetration of Trans-Sinapic acid
- Awarded U.S. patent for AI-based CNS drug discovery technology

LEADERSHIP & EXTRACURRICULAR INVOLVEMENT

Digital Deque Inc.

President, Founder, Director

Aug 2022 – Present

- Founded IRS approved 501(c)(3) non-profit organization to support Veterans' healthcare & well-being
- Educated 30+ veterans on government-provided healthcare benefits
- Raised \$10k+ through community outreach, partnered with local entities to distribute care packages

RespRisk

Independent Project

Nov 2024 – Aug 2025

- Developed Raspberry Pi-based AI device for asthma-related hospitalization prediction via air pollutant data (85% accuracy)
- Published research paper in the Journal of Student Research

SKILLS

- Python, Java, SQL, Linux | LLM Agentic Workflows, n8n (automation) | PyTorch, TensorFlow, Scikit-learn | Deep Learning, NLP, Predictive Modeling, Computer Vision | Research & Publications, Patents, Conference Presentations