

## **Amir Alexander Abed**

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### **WORK EXPERIENCE**

#### **RTX (Formally Known as Raytheon Missiles and Defense) / Signal Processing Engineer I**

April 2023 - Present, Tucson, AZ

- Implemented and tested research papers in prototype system design using Python
- Developed and tested a version of the Lottery Ticket Hypothesis based on the original paper which replicated results equivalent to those verified in the source publishing
- Worked with various angle of arrival estimation algorithms, including MUSIC, ESPRIT, MLE, IRLS, and RISR
- Designed and implemented radar signal processing algorithms in C++, analyzed changes to system using existing software, and presented results to display improvements in performance
- Collaborated with firmware and software teams to ensure seamless cross-layer integration and baseline regression testing
- Created custom data visualization tools using Python to analyze performance metrics

#### **Agnetix / Sensor Development Intern and Full-Time Electrical Design Engineer**

June 2021 - December 2022, San Diego, CA 92126

- Multi-layer PCB design for sensor boards in Altium and enclosure design in Onshape
- Sensor development with soil, temperature, humidity, light, airflow, and lidar sensors
- Produced Python code using Matplotlib and Pandas for data analysis of sensors to determine accuracy; utilized efficient and cost-effective parts that would maximize profits

#### **RF Precision Cables / Technical Assistant**

June 2016 - August 2020 (During Summer), 1600 S Anaheim Blvd F, Anaheim, CA 92805

- Assured quality control through testing procedures after fabrication and testing of RF cables.

### **EDUCATION**

**UNIVERSITY OF ARIZONA** 1200 E University Blvd, Tucson, AZ 85721

M.S. in Electrical Engineering, Machine Learning Depth, December 2025

- Radar Signal Processing, Machine Learning: Pattern Recognition, Quantum Sensing, Quantum Machine Learning, Quantum Communications, and Quantum Networks, SDR using PLUTO+, Algorithms Design and Analysis, Neural Networks

**UNIVERSITY OF CALIFORNIA SAN DIEGO** 9500 Gilman Dr., La Jolla, CA 92093

B.S. in Electrical Engineering, Machine Learning Depth, June 2022

### **SKILLS, ACTIVITIES, GROUPS & CERTIFICATIONS**

- Languages: C, C++, Python, MATLAB
- Technologies: Linux, Docker, MySQL, Arduino, Raspberry Pi, PIC32, MS Office, Git, Bash
- Equipment: Oscilloscope, Multimeter, Spectrum Analyzer, Soldering, Breadboarding
- Design: Altium Designer, Solidworks, Onshape, MPLAB IDE, Quartus Prime
- Other: Technical Documentation, Time Management, Organization, Patience, Communication
- EIT Certificate, July 2023
- COSMOS Cluster Summer Program Assistant helping students transition into college