Noam Yakar

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EDUCATION

B.S., Computer Science Graduating May 2025

Arizona State University, Tempe, AZ

PROFESSIONAL WORK EXPERIENCE

Adept Reality, Software Developer Intern *May '20 - Aug '20*

- Led the development of a chatbot using speech recognition and NLP software in Unity 3D & Python to provide pharmacy students the experience of customer interactions in a virtual environment
- Programmed a speech-to-text script to convert real time audio into input for the chatbot
- Designed a reinforcement learning algorithm for independent response
- Attended daily standups to connect with team and collaborate with senior developers
- Organized biweekly sprints to document progress and set future milestones

RESEARCH PROJECTS

An Autonomous Drone for Water Conservation & Irrigation Optimization *Sept. '19 - Apr. '20*

- Built an autonomous drone with original software that helps farmers optimize water distribution & maximize crop yield
- Designed a camera system that is able to identify different types of plants using a python algorithm in real time
- Measured soil moisture content using probes connected to an Arduino microcontroller
- Sent data wirelessly to an offsite computer for visualization of moisture content in Unreal Engine
- Awards at NJRSF: 1st Place in Engineering Category, IEEE NJ Young Engineer Award, Harvard JEI Award

Design & Construction of a Cost-Effective Full-Arm Prosthesis with Computer Vision *Sept. '18 - May '19*

- Built a physical prototype of a prosthetic arm that continually improves its performance via machine learning.
- Designed the prosthesis in Fusion 360, printed and assembled parts, and used an Arduino interface to connect motors to an EMG sensor.
- Developed a library of muscle potential thresholds to define actuation of prosthetic
- Created a camera and an original Python algorithm system to detect edges of objects the user wants to grasp.
- Awards at ISEF: 4th Place in BME Category (out of 80), INCOSE Best Prosthetic Award.
- Awards at NJRSF: 1st Place in BME Category, Harvard JEI Award, Air Force Award, ISEF Grand Prize.

RESEARCH EXPERIENCE

NYU*: Utilizing Particle Detection Algorithms for Endosomal Behavioral Tracking* *Sept. '20 – Aug. '21*

- Analyzed endosome reaction to the introduction of a pain-inducing drug.
- Created Python Software, to label and track the movement and behavior of endosomes
- Processed video input of endosome movement and plotted particle trajectories over time using matplotlib
- Communicated with professor biweekly with sprints to gain feedback on current progress

ACTIVITIES

Machine Learning Club, Head of Social Media Sep. '21 – Present

- Manage club Instagram by creating flyers in Canva to engage members regarding events
- Host a presentation to teach machine learning concepts and provide example code for further learning.

TECHNICAL SKILLS

Machine Learning & Data Analysis: TensorFlow & Keras in Python

Programming Languages: Fluent in Python, C++, & RobotC. Proficient in Java, C#, SQL.

3D Modeling: Fusion360, SOLIDWORKS, & Inventor.

Robotics: with Arduino & Raspberry Pi.