# Reza (Rey) Sanayei

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### **EDUCATION**

**University of Arizona** 

Tucson, Arizona

Bachelor of Science in Computer Science (Honors)

May 2024

Minor: Statistics & Data Science

**GPA:** 3.95/4.0

- Phi Beta Kappa Membership (Top 5% of class)
- Galileo Circle Scholar (Selected as one of six top performers among 1,277 undergraduates in Computer Science)

#### RESEARCH EXPERIENCE

Honors Thesis - "Analyzing the Performance of LLMs on Natural Language Arguments"

Tucson, Arizona

University of Arizona - Honors College

August 2023 - Present

• Advisor: Dr. Mihai Surdeanu

- Evaluated LLM performance against state-of-the-art formal Computational Argumentation Theory semantics
- Proposed frameworks to enhance LLM performance, laying groundwork for future advancements in argument semantics

## **Undergraduate Research Assistant**

Tucson, Arizona

University of Arizona - Computational Language Understanding Lab

August 2023 – Present

- Investigated hallucinations and machine-generated text detection under the guidance of Dr. Steven Bethard
- Orchestrated ensemble models using language models and text retrieval libraries for diverse hallucination detection
- Designed a multilayer model for learning LLM authorship styles to detect machine-generated text

# **Undergraduate Research Assistant & Software Developer**

Tucson, Arizona

University of Arizona - Pauli Lab

April 2023 – Present

- Developed high-throughput phenotyping pipelines for data from the world's largest plant phenotyping robot
- Utilized the university's High-Performance Computing cluster for efficient, distributed data processing

## TEACHING EXPERIENCE

# Course Coordinator - Object-Oriented Programming & Design

Tucson, Arizona

University of Arizona, Department of Computer Science

August 2022 - Present

- Trained and supervised 8 TAs, enhancing course delivery and student engagement for over 160 students
- Designed 3 key programming assignments and oversaw a comprehensive 5-week final group project

### Teaching Assistant - Analysis of Discrete Structures, Software Development

Tucson, Arizona

University of Arizona, Department of Computer Science

August 2021 – August 2022

- Conducted detailed grading and provided personalized feedback for programming assignments and exams
- Mentored a cohort of 20 students through weekly office hours, improving their understanding in key course concepts
- Led supplemental instruction sessions focused on development environment setup and exam preparation

### PROFESSIONAL EXPERIENCE

## **Machine Learning Engineering Intern - NLP**

Remote

Pido - One of the largest fuel delivery companies in the Middle East

May 2023 – August 2023

- Led an NLP project analyzing Persian social media data for traffic insights, optimizing fuel delivery vehicle allocation
- Engineered sentiment analysis and location extraction ML models to enhance fuel allocation strategies

#### **Software Engineering Intern**

Remote

Namava - VOD service with +6 million users in the Middle East

May 2022 – August 2022

- Enhanced backend services and database query efficiency, achieving a 20% reduction in latency
- Played a key role in integrating third-party payment APIs, streamlining the user subscription process

## LEADERSHIP & VOLUNTEER EXPERIENCE

President, Google Developer Student Club, University of Arizona

August 2023 - Present

- Revitalized the chapter, growing active participation from 15 to over 70 members
- Hosted a series of workshops on Google technologies, ML, NLP, Computer Vision, and Android Development

## College of Science Ambassador, University of Arizona

August 2023 – Present

- Nominated as the sole representative by the Department of Computer Science to engage with and represent the college
- Facilitated new student orientations and departmental tours, led info sessions for prospective students and parents

## Computer Science Peer Mentor, University of Arizona

February 2023 – Present

- Guided first-year students with academic and research advice, fostering social integration and a sense of community
- Organized information sessions on course selection, sharing experiences to inspire and inform students

## Campus Pantry Student Volunteer, University of Arizona

August 2022 - Present

• Volunteered **two hours weekly**, aiding in food distribution

#### **COURSEWORK**

Undergraduate Courses: Neural Networks, Text Retrieval & Web Search, Algorithms, OS, Computer Graphics (audit), Computer Vision (audit), Linear Algebra, Vector Calculus

Graduate Courses: Statistical Natural Language Processing, Algorithms for NLP, Intro to Machine Learning

#### **HONORS & AWARDS**

Computer Science TA of the Month - University of Arizona

September 2022

• Nominated by faculty for exceptional contributions as a TA, recognized among the top 2 in the department

Business Consulting Competition Winner - University of Arizona, Eller College of Management

April 2021

Spearheaded a winning team strategy in a sales data analysis case, achieving first place among 20 teams

Global Wildcat Scholarship - University of Arizona

August 2019

• Awarded for outstanding academic performance

#### **TECHNICAL SKILLS**

Programming Languages: Python, Java, C, SQL, R

Tools & Frameworks: PyTorch, TensorFlow, Keras, NumPy, Hugging Face, Open3D, Docker, Git, Bash, RESTful APIs