


Gülnur Zehra Avcı

gulnurzavci@gmail.com | LinkedIn |  GitHub | Portfolio

EDUCATION

Columbia University in the City of New York
Bachelor of Science in Electrical Engineering

New York, NY
May 2023

EXPERIENCE

QA Wolf

Software Engineer

Remote
June 2024 - Present

- Build platform features using React and GraphQL, directly resulting in time saved per QA Engineer and improved margins for the company.
- Develop robust automated tests using the Playwright framework for clients managed by our team.
- Onboarded an enterprise client bringing in over \$150,000 in annually (and expected to expand). Spearheaded the creation of 400 tests within the first 4 months, maintained good communication between the client and our team, and implemented best practices to ensure a robust and sustainable QA environment for the client.
- Onboarding a major project for a leading AI company, leveraging machine learning expertise to design and implement reliable model outcome testing.

HRL Laboratories - RF & mmWave Systems

Intern

Malibu, CA
May 2022 - November 2022

- Developed a Python-based beam simulation program using libraries like pymap3d and matplotlib.
- Integrated topological elevation data to map the radar beam footprint projected from the nose of an aircraft.
- Verified simulation accuracy through mini-radar experiments, transmitting signals and measuring received power with a power analyzer, ensuring reliability for radar technology research.
- Wrote initialization scripts in C for hardware drivers used in a prototype, involving a detailed analysis of the user manual to identify and configure the relevant registers for proper functionality.

NASA Glenn Research Center

Intern

Cleveland, OH
August 2021 - January 2022

- Developed user-friendly GUI for NASA's Glenn-HT code, a high-performance computational fluid dynamics software for simulating heat transfer in jet engine components.
- Programmed efficient code in C# for interpreting, processing, and writing simulation files.

Columbia University - Wireless and Mobile Networking Lab

Research Assistant

New York, NY
May 2021 - August 2021

- Operated Nokia Bell Labs testing equipment to take outdoor-to-indoor 28GHz mmWave measurements, analyzing path loss at various transmitter and receiver locations.
- Published as third author: M. Kohli, A. Adhikari, G. Avcı, et al. "Outdoor-to-indoor 28 GHz wireless measurements in Manhattan: Path loss, environmental effects, and 90% coverage," *IEEE/ACM Transactions on Networking*, 2024.

PROJECTS

LangChain, Hugging Face, AWS, and Unity: Virtual Reality Video Game

October 2017 - Present

- Building a virtual reality video game where the player can speak and interact with an AI powered virtual friend who responds both audibly and in body language. It is a proof of concept that demonstrates the merits of such technology in areas such mental wellness, virtual tourism, and education.
- Utilizing Hugging Face for reliable inference endpoints, Langchain for building conversational RAGs with persistent memory and integrated tools, AWS for user management and conversation history, and Unity Game Engine for creating an engaging character and environment.

Hugging Face: Analyzing Public Opinion Semantics using the Reddit API

February 2024 - April 2024

- Built a tool that extracts daily content using the Reddit API to calculate sentiment scores about the Reddit community's views on leading tech companies
- Performed data analysis by leveraging the Reddit API to extract relevant subreddits, posts, and comments.
- Experimented with different sentiment analysis models and techniques to correctly assess public opinion on different topics.

SKILLS AND INTERESTS

Languages: Python, C++, C#, C, JavaScript, GraphQL, Java

Libraries/Frameworks: Node.js, React/React Native, LangChain, PyTorch, Hugging Face, Playwright, Matplotlib, Pandas, NumPy, SciPy, Tensorboard

Tools/Software: Unity Game Engine, Postman, Git, MATLAB, LaTeX

Interests: Private Pilot Training, Fitness, Mural Painting, Finance, Music, Sewing