

# Ilana Zane

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**With over 3+ years of experience in advanced machine learning research and development across academic and industry settings, I possess robust leadership and technical skills. I am proficient in data handling and visualization, and hold a deep understanding of fundamental machine learning concepts.**

## Programming Experience

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**Languages:** Python (7+ years), Java, R, C, C++, MATLAB, React, SQL, Git

**Libraries:** TensorFlow, PyTorch, Hugging Face, PySpark, PyPi, scikit-learn, Neo4j

**Web Programming:** HTML, CSS, JavaScript

**Data Interchange:** JSON, STL

**Machine Learning Techniques:** GPT-2, LangChain, RAG, QuartzNet, Natural Language Processing, K-Nearest Neighbors, CNNs, SVMs, Autoencoders

## Work & Research Experience

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### Harbor.ai

**NY, NY**

#### *Machine Learning Engineer*

**03/23 - Current**

- Driving the development of machine learning solutions, including recommendation engines and risk modeling to optimize decision-making processes in the insurance domain with initial accuracy of 97%
- Implemented NLP techniques such as Latent Dirichlet Allocation for feature reduction
- Developed and implemented automatic decision-making capabilities, enhancing efficiency and accuracy in risk assessment by 80%
- Pioneering the dynamic generation of knowledge graphs based on client preferences by employing machine learning principles and thus, adapting to evolving business needs

### Stevens SMARTLab

**Hoboken, NJ**

#### *Graduate Research Assistant*

**Summer 2022**

- Developed human-like motion planning algorithms through SLAM for improved navigation in crowded environments
- Applied Rviz and Gazebo to train/test Deep Reinforcement Learning (DRL) algorithms, optimizing robot decision-making

### Stevens AISEcLab

**Hoboken, NJ**

#### *Graduate Research Assistant*

**Spring 2022**

- Lead integration of versatile robotic arm by combining LiDAR, a robotic arm, and ROS for seamless communication and integration
- Implemented NLP techniques for enabling voice-activated commands, with Nvidia Jetson, and computer vision techniques, with Raspberry Pi, for autonomous object recognition and specify object retrieval

### Stevens HPDA Lab

**Hoboken, NJ**

#### *Graduate Research Assistant*

**Spring 2020**

- Created a web crawler in Python to download more than 20,000 publications related to COVID-19 from PubMed for Natural Language Processing (NLP) task
- Used an LDA model to find most popular topics amongst all publications

### E\*TRADE

**Arlington, VA**

#### *Software Engineering Intern*

**Summer 2019/20**

- Revamped FSQ security question feature for user authentication with personalized questions
- Acquired proficiency in Angular, MVVM frameworks, and implemented React for OTP verification in E\*TRADE registration

## Education

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### Stevens Institute of Technology

**Hoboken, NJ**

**GPA: 4.0** MS in Applied AI and Robotics

**08/2021-12/2022**

### Rutgers University

**New Brunswick, NJ**

**GPA: 3.8** BS in Computer Science, French

**08/2017-05/2021**