

# LIZA JIVNANI

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*"Someone, somewhere in the world must experience more 'Love' because of my work."*

## EDUCATION

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**Bachelor of Science** | *Computer Science* | *Minor in psychology*  
University of South Florida, Tampa, FL

Jan 2021 – Dec 2024  
GPA: 3.79

## TECHNICAL SKILLS

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**Data Science Libraries:** : Keras, Tensorflow, PyTorch, Sklearn, NLTK, Pandas, Numpy, Matplotlib  
**Computer Vision:** OpenCV, OpenFace, OpenPose, Convolutional Neural Networks (CNN), Random Forests  
**Deep learning methods:** Transformers, Neural networks, XGBoost  
**Programming Languages:** Python, Java, C++, SQL, MATLAB

## PUBLICATIONS

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1. **L. Jivnani**, Fallon Goodman, Jon Rottenberg, and Shaun Canavan. Predicting Loneliness from Subject Self Report, Affective Computing, and Intelligent Interaction main Conference, 2023.
2. M. Chaudhary, S. Aathreya, Y. Peng, H. Wang, J. Brabazon, R. Harris, **L. Jivnani**, L. Mondesir, N. Wai, L. Anthony, S. Canavan, J. Ruiz, and T. Neal. Toward Understanding Children's Use and Understanding of User Authentication Systems: Work-in-Progress, USENIX Symposium on Usable Privacy and Security (SOUPS), 2022
3. S. Aathreya, **L. Jivnani**, S. Srivastava, S. Hinduja, and S. Canavan. Task-based Classification of Reflective Thinking using a Mixture of Classifiers, Affective Computing, and Intelligent Interaction Workshops, 2021. **(Received Best Paper Award)**

## EXPERIENCE

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**Research Assistant** | **Computer Vision & Affective Computing lab**  
University of South Florida

May 2021 – Present  
Tampa, FL

### 1. Decision-Making in Context (Ongoing):

- 5-year Army-funded project that explores human-AI cooperation in high-stress settings using multimodal data (audio, video, EEG, and physiological). Involves interdisciplinary collaboration across various universities.
- Trained person-dependent and & person-independent ML and deep learning models on EEG data to predict the next move of the subject in an Iowa gambling task.

### 2. Autism Detection in Children

- Predict ASD in children, a developmental brain difference. Shifting diagnosis from 4 years to 18-36 months to enhance early intervention and treatment efficacy.
- Utilized computer vision libraries like OpenCV to process and analyze video datasets, enhancing efficiency by up to 30% through frame optimization and content extraction.

### 3. Continuous Authentication and Group Emotion Recognition, NSF REU

- Design and evaluate user-centric age-aware Continuous Authentication models for computer workstations, mobile devices, and wearables using video and physiological data.
- Created Java-based applications for desktop & mobile platforms to streamline data collection resulting in a 300% acceleration and enhancement in the data collection process.

**Co-Founder | Kadoka Academy**[www.KadokAcademy.com](http://www.KadokAcademy.com)

May 2023 – Present

St Petersburg, FL

A school for 'misfits'

- A nonprofit serving the skillsets that schools forgot to teach us.
- "A gathering place" for high schoolers to have conversations that matter.
- Launched our first cohort with 5 students on September 16, 2023

**AI curriculum Designer | Code/Art**

Inspiring K-12 girls to code

May 2022 – August 2022

Miami, FL

The Talkative Me, (Natural Language Processing):

- Utilized NLTK to train an interactive AI agent with voice control, for an Intro to AI with Art session.
- Implemented a mood-setting functionality utilizing continuous learning (CL) techniques
- Implemented several intelligent behaviors like Telling a joke, interacting with the user about their day, saying goodbye in 40+ ways, etc.

**Senator | Student Government**

University of South Florida

May 2021 – May 2022

Tampa, FL

Knew exactly zero people in the whole country and still won the senate election

- Advocacy for Student Needs: Actively represented the concerns and needs of the diverse voices on campus and communicated their issues to the relevant authorities. For e.g.: improving parking facilities on campus.
- Policy Committee Member: Collaborated with fellow senators to propose new policies and amendments to existing regulations to enhance the overall student experience.
- Relations Committee Member: Established positive relationships with various stakeholders to promote the growth of the student body.

**Tech and Expo chair | Girls who code**

University of South Florida

Feb 2021 – May 2021

Tampa, FL

Increased women engagement in STEM

- Organize Weekly Workshops for teaching Python. Designed personalized projects to aid the engagement.
- Developed a TIC TAC TOE with AI game for ENGINEERING EXPO 2021.

**Software and Networking Instructor | IANT**

Institute of Advanced Networking Technologies

Jan 2020 – Aug 2020

Surat, India

I was 19, teaching various 20 - 35 year olds

- Taught several programming languages (python, C++, Java, SQL), scripting languages, and fundamentals of networking.
- Implemented various real-world coding projects with my students like e-commerce apps, automation apps, and many more.

**Teaching Volunteer | Robinhood Army**[www.robinhoodarmy.com](http://www.robinhoodarmy.com)

May 2019 – August 2020

Surat, India

Got in a fight with the parents, they thought learning to use computers was a 'waste of time' for their daughters

- Served the underprivileged girls from orphanages, deaf & mute schools & remote slums by providing them with computer literacy. Taught them how to utilize basic technology to learn and grow.

## HONORS AND AWARDS

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### **Honorable Mention | CRA Outstanding Undergraduate researcher award 2024**

The competition is among all the undergraduate students in North America

### **Presented at ACII 23 | MIT Media lab**

Affective Computing, and Intelligent Interaction main conference, 2023

### **Best paper award**

Affective Computing, and Intelligent Interaction Workshops, 2021

### **Dean's List**

4 semesters | Awarded to top 10% of USF students for excellence in academics

### **Finalist**

Florida Blue Health Innovation Challenge | among 12 selected students across all the universities in Florida

### **1st rank | Brain drone racing competition**

Competed with 60 USF students to control a BCI-based system to fly drones

### **Computing Partners Scholarship**

Merit-based scholarship that requires a nomination from the engineering faculty board of USF

## AI PROJECTS

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### **1. Purchasing Behavior of Online Shoppers**

Trained Random Forest-based models to predict to predict online purchase behavior using various user engagement metrics like webpage duration and visit. Achieved upto 85% accuracy.

### **2. Traffic Signs Recognition**

Fine-tuned a CNN (Convolutional Neural Network) utilizing TensorFlow and OpenCV to classify a diverse set of traffic signs from the GSTRB (German Traffic Sign Recognition Benchmark, which contains thousands of images of 43 different kinds of road signs.). Achieved an accuracy of 95%

### **3. Predicting the Inheritance of GJB2 Gene**

Utilized Numpy to evaluate the Bayesian probabilities to analyze gene copy distribution to predict the GJB2 gene's behavior, achieving 90% accuracy in predicting its inheritance.

### **4. Nim Game**

Utilized Q Learning Algorithm to implement reinforcement learning based agent to play the Nim game. Achieved a win rate of 85% against human opponents.

### **5. Sudoku with AI**

Utilized backtracking algorithm to implement a sudoku solver.

### **6. Six Degrees of Kevin Bacon game**

Implemented the Breadth-First Search algorithm to train an AI agent to predict the shortest degree of separation between selected actors, achieving an accuracy of 95% on an IMDb dataset of 1000 actor pairs.