

LIZA JIVNANI

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Solving loneliness to help design a world with healthier, happier minds.

EDUCATION

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

Jan 2021 – May 2025
GPA: 3.81

HONORS AND AWARDS

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

Awarded among all the undergraduate students in North America | [Featured in USF news](#) —

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

PUBLICATIONS

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)*

RESEARCH EXPERIENCE

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

COMMUNITY SERVICE

Co-Founder | Kadoka Academy

www.KadokAcademy.com

A school for 'misfits'

- A nonprofit serving the skillsets that schools forgot to teach us.
- A conscious effort to help high schoolers become well-rounded individuals capable of making a positive impact in their communities and beyond.

May 2023 – Present

St Petersburg, FL

AI curriculum Designer | Code/Art

Inspiring K-12 girls to code

The Talkative Me, (Natural Language Processing):

- Designed an AI agent to inspire K-12 girls to harness the power of AI.

May 2022 – August 2022

Miami, FL

Senator | Student Government

University of South Florida

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.

May 2021 – May 2022

Tampa, FL

Tech and Expo chair | Girls who code

University of South Florida

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.

Feb 2021 – May 2021

Tampa, FL

Software and Networking Instructor | IANT

Institute of Advanced Networking Technologies

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.

Jan 2020 – Aug 2020

Surat, India

Teaching Volunteer | Robinhood Army

www.robinhoodarmy.com

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.

May 2019 – August 2020

Surat, India

TECHNICAL SKILLS

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

AI PROJECTS

1. Purchasing Behavior of Online Shoppers

Trained Random Forest-based models 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.