

Medha Gupta

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EDUCATION

RICE UNIVERSITY

B.A. IN COMPUTER SCIENCE

Expected May 2021 | Houston, TX

Minor in Neuroscience

SKILLS

LANGUAGES

Proficient:

Java • Python • \LaTeX

Intermediate:

R • C • MATLAB

Novice:

Solidity • HTML/CSS • Javascript •

Node.js • Web3.js

TOOLS & FRAMEWORKS

Tensorflow • Keras • SQL • PySpark •

NumPy • UnrealCV • Habitat-SIM

LINKS

Github:// [medha-gupta](#)

LinkedIn:// [medhagupta31/](#)

COURSEWORK

Advanced Object Oriented
Programming

Computer Systems

Program Design & Functional
Programming

Tools and Models for Data Science

Advanced Algorithms

Statistics for Data Science

Discrete Math

Introduction to Tensorflow for AI & ML
(via deeplearning.ai)

Linear Algebra

Algorithmic Thinking

AWARDS

BlackRock Fast Track to FinTech
Participant

EXPERIENCE

FACEBOOK | SOFTWARE ENGINEERING INTERN

May 2020 - Aug 2020 | Menlo Park, CA

- Incoming Intern for Summer 2020

COMPUTER-HUMAN INTERACTION LAB | RESEARCH ASSISTANT

Jan 2020 - Present | Houston, TX

- Using **ACT-R** (a cognitive architecture and Python package) to create simulations based off of eye-tracking data collected from paper ballot voting to evaluate the usability of voting systems under **Dr. Mike Byrne**

NOD LABS | COMPUTER VISION INTERN

May 2020 - Aug 2020 | Menlo Park, CA

- Integrated a **deep reinforcement learning algorithm** for visual navigation with Habitat-SIM, an artificial intelligence research environment
- Implemented Nelder-Mead **optimization** of the SLAM algorithm MapNet in **Tensorflow**, resulting in training of the model without backpropagation
- Developed **Python scripts** to explore a virtual scene for generation of training datasets with **UnrealCV**

PROJECTS

CHATAPP | ADV. OBJECT ORIENTED PROGRAMMING

Mar 2020 | Houston, TX

Created an Omegle-like ChatRoom application using **Java RMI** with a **peer-to-peer architecture** and **asynchronous message sending** that allows users to connect to a central server, create, join and invite each other to chatrooms, and send text messages, images, and "secret messages" to each other.

RAW TEXT SEQUENCE CLASSIFIER | TOOLS & MODELS FOR DATA SCIENCE

Dec 2019 | Houston, TX

Implemented **RNNs** with time warping and feed-forward networks to classify large datasets of raw text in **Tensorflow**, achieving **over 85% accuracy** by modifying the initial algorithm to use **convolutional filtering** of the RNN on the testing dataset.

PART OF SPEECH TAGGING (NLP) | ALGORITHMIC THINKING

Apr 2019 | Houston, TX

Implemented statistical learning of a HMM using a training corpus of pre-tagged sentences in Python and the **Viterbi algorithm** to assign part of speech tags using the trained HMM with **accuracies of over 90%**

LEADERSHIP

CO-PRESIDENT DESIGN FOR AMERICA | RICE UNIVERSITY STUDIO

Apr 2019 - Present | Houston, TX

DFA is a national organization focusing on social entrepreneurship and innovation that creates local social impact through human centered design.

- Teach the **human-centered design** process to 25-30 students including user research techniques, rapid prototyping, and sustainable implementation
- Communicate with **Houston non-profits** and the national DFA organization in order to **scope 5-7 social impact design projects** per semester