Ruchita Mahesh Kumar

5665 Domer Dr, Frisco, TX 75035 • (469) -910-3812 • Ruchita.maheshkumar@utdallas.edu
https://www.linkedin.com/in/ruchita-mahesh-kumar-a539751a5/

EDUCATION

University of Texas at Dallas — Dallas, TX
M.S., Applied Cognition and Neuroscience, Intelligent Systems track — May 2022
GPA 3.6/4.0

University of Texas at Dallas — Dallas, TX
B.S., Cognitive Science: Artificial Intelligence and Neuroscience — Aug 2018 - Dec 2021
Department of Behavioral Brain Sciences
GPA 3.6/4.0

RESEARCH EXPERIENCE

Texas Biomedical Device Center — Dallas, TX
Undergraduate Research Assistant — Nov 2018 – Dec 2021

- Targeted Plasticity Therapy project where Vagus Nerve Stimulation paired with sounds improves responses in Autistic rats
- Completed extensive micro construction quotas - bioinstrumentation included building microdevice implants such as cuffs, headcaps and swivels
- Precisely prepared drug cocktails such as Saline, Atropine etc
- Collected behavioral training data for Go/No-Go testing.
- Delivered Vagus Nerve stimulation facilitated rehabilitative training to the control and experimental rats.
- Prepared surgical tools and drugs for approximately 20 neurosurgeries including auditory mapping and craniotomies.
- Responsible for rodent breading and exposed rats to valproic acid to induce autism

WORK EXPERIENCE

Medical Artificial Intelligence and Automation Lab, UTSW — Dallas, TX
Research Intern — Dec 2021 – Present

- Developing deep learning auto segmentation technologies for identifying organs at risk in patients with nasopharynx and lung cancer.

Glia Health — Dallas, TX
Artificial Intelligence Intern — March 2021 – Nov 2021

- Was able to establish Glia Heath as a corporate sponsor for the UNT department of Engineering's senior design capstone project by pitching a detailed project proposal for "N-sight camera" - eye tracking software that detects cranial nerve weakness.
- Conducted data acquisition, built mock-ups and heuristic evaluation for the proposed cranial nerve examination procedure

Aster CMI Hospitals — Bangalore, India
Neural Engineering Intern — June 2019– August 2019

- Trained for various Neurophysiological monitoring techniques such as Transcranial Doppler, Neurosonogram, Nerve & Muscle Ultrasound, Nerve Conduction Study, Repetitive Nerve Stimulation

Study, Ultrasound Guided Injections for Carpel Tunnel Syndrome, Meralgia Paresthesia and Deep Brain Stimulation Technology for Parkinson's disease
- Analyzed EEG reports and various Neurological Diagnosis techniques.

TEACHIING EXPERIENCE

University of Texas at Dallas Dallas, TX
First Year Leader, Department of Behavioral and Brain Sciences Jan 2021 - Present

- Developed a curriculum and taught a University class to incoming freshman
- Trained in leadership
- Instructed the Behavioral Brain Science Seminar course and mentored incoming freshmen students in their first semester to make their transition to college successful
- The course is designed to introduce freshmen to UT Dallas and the School of Behavioral Brain Science while providing critical guidance about career paths for their majors, study skills, and problem-solving skills in a classroom setting.

PUBLICATIONS AND PROJECTS

M. Ruchita. *Linear Regression prediction of Stress and Productivity from Perceived Workspace Impact during Covid-19.* Midwestern Undergraduate Cognitive Science Conference, Indiana University, Nov 2021 [Poster Presentation] https://issuu.com/ruchitamahesh/docs/final_paper.docx

L Rain, K Ruchita, P Fatima,T Giblet, R Harshini, and U Smrithi. *A Novel Approach to Detecting Connectome Differences of Schizophrenia Patients using Linear Machine and Convolutional Algorithms CNN.* May 2021 https://issuu.com/rmaheshkumar2/docs/cnn.docx

K Ruchita, G Richard [supervisor]. *A Fully Automated Framework for Alzheimer's Disease* [Honors Thesis]

A Rahul, D Harsh, L Taylor, K Ruchita and Le Evelyn. *A UX Case study: Improving Uxperience for Ebay*. May 2021

K Ruchita. *Ultimate Tic Tac Toe game using Object Oriented Programming*. December 2020

PRESENTATIONS

M. Ruchita. *Linear Regression prediction of Stress and Productivity from Perceived Workspace Impact during Covid-19.* Midwestern Undergraduate Cognitive Science Conference, Indiana University, April 2021 [Poster Presentation]

HONORS & AWARDS

Leaders of Excellence Award, Office of Undergraduate Education 2021
Duke of Edinburgh International Award for Young People 2016

LEADERSHIP & OUTREACH

Artificial Intelligence Society
Dallas, TX
Board Director Dec 2021 – Present
I am a part of the one of the largest technology organizations on campus where I am involved in providing AI related content to our members and high schools along with making corporate relations.

User-experience Club
Dallas, TX

Fundraising Director Aug 2020 – Aug 2021

As the fundraising director I organized the largest UI/UX conferences called "UXpereince conference" where we invited many fortune 500 companies along with startups in the Dallas fort worth metroplex to raise awareness about user centered design.

Freshman Mentor Program Dallas, TX

Third year veteran mentor Aug 2019 – Present

I am a freshman mentor where I provide 1:1 mentoring for a freshman each semester and guide them through the college experience while increasing campus engagement.

VOLUNTEER WORK

Molding Doctors Dallas, TX

Fundraising Committee Member Aug 2018 – Aug 2019

Raised $4000 by organizing a 5k run, for The North Texas Food Bank and Dallas Life Homeless Shelter.

PROFESSIONAL AFFILIATIONS

Artificial Intelligence Society
Association for Computing Machinery (ACM)
UX Club
Society of Women Engineers

2018 – present

RELEVANT COURSEWORK

Cognitive Psychology, Experimental Projects, Research Design and Analysis, Statistics for Psychology, Data Structures and Algorithms, Systems Neuroscience, Human Computer Interactions II, Probability and Statistics for Software Engineering, Neural Modelling, Intelligent Systems, Neurobiology, Neural Net Mathematics

SKILLS

- **Research:** Behavioral Training, Soldering, Micro construction of biomedical devices, Brain Mapping, Rodent research handling, IRB certified.
- **Programming**: C++, Java, MATLAB, Julia
- **UX Design:** Adobe XD, Figma, Envision

REFERENCES

Dr Richard Golden, PhD
Program Head, Masters Program in Applied Cognition and Neuroscience
Program Head, Undergraduate Program in Cognitive Science
Professor of Cognitive Science and
Participating Faculty Member in Electrical Engineering
University of Texas at Dallas
www.utdallas.edu/~golden
https://labs.utdallas.edu/coinslab/
Author: *"Statistical Machine Learning: A Unified Framework"* (CRC Press, 2020).
(www.statisticalmachinelearning.com)

Dr Lokesh Bhattulla, MBBS, MD, DM
Lead Consultant Neurologist, Aster CMI Hospital
Head of Neuroscience Department
Bangalore, India

https://www.researchgate.net/scientific-contributions/Lokesh-Bathala-59306405

Crystal T. Engineer, Ph.D.
Texas Biomedical Device Center
Professor
School of Behavioral and Brain Sciences
The University of Texas at Dallas
972-883-7246