KASYAP VARANASI

kasyap3.github.io/website ⋄ www.linkedin.com/in/kasyap-varanasi

+1 413 345 9894, lvaranasi@umass.edu

EDUCATION

University of Massachusetts - Amherst *Aug 2024 - May 2026*
M.S. in Computer Science
Relevant Coursework   Introduction to Neural Networks, Machine Learning, Applied Statistics

Vellore Institute of Technology *Aug 2020 - May 2024*
B.Tech. in Computer Science and Engineering
GPA: 3.9/4.0
Thesis: Optimized Fetal Monitoring with Fourier Bi-Directional LSTM and Attention Mechanisms
Advisors: **Prof. Sumathi D** and **Dr. Samaneh Mazaheri** (Professor, University of Toronto)

RESEARCH EXPERIENCE

Microsoft Research Jan 2024 - Jul 2024
Developed an algorithm to decode cardiac signals for arterial control tasks
Correlating cardiac behavior with early diagnosis; predictive modeling and personalized therapies

University of Toronto May 2023 - Sep 2023
Supervisors: Prof. Samaneh Mazaheri, Prof. Rahul G. Krishnan
Engineered mini model 'CancLite' a 12-layer network for breast cancer detection
Elevated feature analysis to near real-time; reduced failure rate to 0.1%; augmented screening by 20%

Indian Institute of Information Technology, SriCity Jun 2022 - Apr 2023
Supervisors: Prof. Chandra Mohan Dasari
Integrated QnA, EEG, and genetic patterns, with an 88% accuracy in detecting psychiatric conditions
Improving diagnostics with rs-EEG as a key biomarker for enhanced psychological disorder identification

Harvard University Jun 2022 - Aug 2022
Supervisors: Prof. Jonnathan Frankle
Conceptualized a novel comprehensive gene panel specifically for early-stage colorectal cancer detection.
Analyzed gene expression patterns in a large cohort of individuals using hybrid and genetic algorithms.

PUBLICATIONS

1. **Varanasi. L.V. S K B Kasyap**, Mure Sai Jaideep Reddy, Anupama Namburu, Senthilkumar Mohan, Vimala Nagabotu, Massimiliano Ferrara; FBDNN: Fetus Health Management Using Morse-based Bi-LSTM Deep Neural Network; IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE TPAMI) 2024 *Accepted and Awaiting Publication*

2. **L.V.S.K.B. Kasyap Varanasi**, Chandra Mohan Dasari; Deep Learning based techniques for Neuro-degenerative disorders detection; Engineering Applications of Artificial Intelligence (EAAI) 2023 *Paper*

3. Naman Bhatia, **Kasyap Varanasi. L.V.S.K.B**, Parth Raghuwanshi, Avinash Saroj, and Chandra Mohan Dasari; Neuro-degenerative Disorder Prediction Using Curated Short Mutated Genome Sequences through Hybrid Deep Neural Networks; ACM 12th International Conference on Bioinformatics and Computational Biology (ICBCB) 2024 *Paper*

4. **L. V. S. K. B. K. Varanasi** and C. M. Dasari; PsychNet: Explainable Deep Neural Networks for Psychiatric Disorders and Mental Illness; IEEE 6th Conference on Information and Communication Technology (CICT) 2022 *Paper*

5. **Kasyap, V.L.V.S.K.B.**, Jagadeesh, M.S., Bhagavan, V.S., Smys Tavares, Shi Fui Lee; Early Detection of ColoRectal Cancer Using Patch-Based Hybrid Model and Transfer Learning; Computational Vision and Bio-Inspired Computing (CVBIC) 2023 *Paper*

PATENTS

1. John A. Smith, **Varanasi L V S K B Kasyap**,Lohitha Rani Chintalapati, Emily Johnson, Hiroshi Tanaka, Maria Garcia, Ahmed Al-Farsi, Isabella Martinez, Yagnesh Challagundla, Li Wei, Raj Patel, Chloe Davis, Nikolai Ivanov, Priya Singh, Anya Müller, Carlos Fernández, V S Bhagavan, Aisha Al-Mansoori; Self-learning-based automatic electrocardiography analysis method, With Microsoft AI Team Patent No. 202341025471 A *Patent*

2. Jenson McCullum, **Varanasi L V S K B Kasyap**,Lohitha Rani Chintalapati, Emily Johnson, Amit Patel, Ravi Kumar; Smart Glass for Assisting Visually Impaired Users with Voice Assistance,With Microsoft AI Team Patent No. 202341013863 A *Patent*

AWARDS AND GRANTS

1. VIT RGEMS seed fund for Hybrid Model based Gastric Cancer Detection System
2. SERB Star Grant for Real-Time Neurofeedback System for ADHD Management
3. ICAR-NAHEP 3.0 Third Prize Winner, Smart India Hackathon Winner
4. Academic Excellence Award (Dept. rank 3 out of 219)
5. Microsoft Imagine Cup 2022 National Finalist

SKILLS/HOBBIES

1. **Programming Languages:** C++, Java, Python, SQL, JavaScript, TypeScript

2. **Software Engineering Technologies and Frameworks:** HTML, CSS, ReactJS, Node.js, Django, Docker, Git, Jenkins, Kubernetes, AWS Cloud, Jupyter Notebook, Visual Studio Code, IntelliJ IDEA, Angular, Flask, Ruby on Rails, Microservices, REST APIs, GraphQL

3. **Libraries:** Pandas, NumPy, SciPy, Scikit-learn, TensorFlow, Keras, PyTorch, OpenCV, OpenGL, NLTK, SpaCy, OpenAI Gym

4. **Hobbies:** Playing Football, Pencil Art and Visiting Art Galleries, Blogging and Vlogging

EXTRACURRICULAR

Core Member at Cord.ai - Student community for AI research
Vice-President at Machine Learning Club VIT-AP
Student Research Head at AIR-VIT AP