Vineeth Ramesh

142 Abercrombie St, Sydney | +917358988010 | vram0324@uni.sydney.edu.au | linkedin.com/in/vineeth2281/

Product Portfolio: vineethramesh.me

Experience

UNDERGRADUATE RESEARCH ASSISTANT | JAIN UNIVERSITY **AUG 2022 - FEB 2023**

- Led the transformation of the BERT architecture by introducing mixed attention and incorporating convolutional and self-attention blocks. This strategic enhancement, aimed at minimizing computational training costs by 20%, propelled accuracy to an impressive 90.79%.
- Effectively collaborated in the design and implementation of a lightweight convolutional approach for tracking changes in remote sensing images. This approach resulted in a 12% improvement in F1 score from existing approach significantly enhances detection capabilities.

ML TEAM LEAD| GOOGLE STUDENTS DEVELOPER CLUB **SEP 2021 – JUL 2022**

- Spearheaded the development and delivery of 5 workshops focused on Google Cloud ML Infrastructure, reaching over 150 participants. These workshops equipped participants with the skills and knowledge to leverage Google Cloud's powerful ML tools.
- Pioneered the creation of a web-based meeting platform featuring an integrated mental health chatbot during the pandemic, redefining online learning. This innovative initiative had a profound and enduring effect on the learning approaches of over 100 students, effectively addressing the challenges presented by the remote learning landscape.

ML INTERN | ZEBO.AI **MAY 2021 – JUL 2021**

- Led the exploration and implementation of the end-to-end ML lifecycle for a deep regression analysis model for acene counting and severity grading, collaborating closely with a team of mentors. My contributions included designing novel network layers, implementing advanced training strategies, and conducting rigorous evaluation using various metrics.

Education

MASTER OF COMPUTER SCIENCE **FEB 2024**

Majors in Human Computer interaction

University of Sydney

Course work (Sem 1): IDEA9106 Design Thinking, INFO5990 Professional Practice, COMP9003 OOPS

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE **AUG 2019 - JUL 2023**

Majors in Artificial Intelligence

Jain University | GPA: 9.01/10

Course work: Machine Learning, Natural Language Processing, Data Structures, Computer Vision, Human Computer Interaction, Innovation and Ventures, Research and Development, ANN, and Deep Learning.

Skills and Abilities

Product Roadmap (PRD), Market research, KPI, Customer needs analysis, SQL, C++, Python, Operating Systems, OOPS, Data Structures, System Design, Machine Learning, NLP

Projects

L50 TOXICITY PREDICTION USING NEURAL NETWORK AND QSAR MODELLING

https://github.com/vineeth2281/L50-TOXICITY-PREDICTION-USING-QSAR

- Constructed quantitative regression QSAR models with 6 innovative molecular descriptors to predict acute aquatic toxicity (LC50) on a dataset of 908 chemicals. Achieved remarkable performance with an R-squared value of 0.94 and an average error of 10%, surpassing existing models by 20%. These models offer an efficient screening tool for potential aquatic toxicity, minimizing the necessity for costly and time-consuming laboratory testing.

SCENE TO CONTEXT

https://github.com/vineeth2281/Scene-to-Context

- Engineered a captioning system by integrating the YOLO object detection model with ResNet50 for streamlined image comprehension. Implemented an RNN leveraging Bayesian theorem for accurate sentence generation, resulting in an impressive BLEU Score validation accuracy of 68%. Surpassing the performance of current models, this project highlights its potential for impactful applications in image description and accessibility tools.

LETSMEET – STREAMLING MEETING AND WELLBEING OF MENTAL HEALTH

https://github.com/vineeth2281/Lets-Meet

- Developed and launched a comprehensive web-based learning application that seamlessly integrates real-time group video communication with conversational AI capabilities for student mental well-being with user centric design This platform, built on socket-io and WebRTC technology, harnesses the power of a custom RASA pipeline with ConveRT for intent and entity classification, enabling the platform to provide personalized guidance, feedback, and emotional support to students. Employed a sliding window approach, so that Chabot system accurately grasps the user's intent and context, fostering a supportive and engaging virtual learning environment that prioritizes student well-being.

Publications

A PROPOSED CHATBOT PSYKH YOUR PERSONAL THERAPIST AND STRESS BUSTER USING RASA FRAMEWORK

IEEE OCTON-2023

·

CALORIFIC VALUE ESTIMATION AND CUISINE RECOMMEDATION USING NEURAL NETWORK

International conference on Advances in computer science and applications (CSA-2022 by ASSECOM)

Achievements

- **Sydney International Student Award** Recipient.
- **Winner (Best Use of Google Cloud), Shell hacks 2020** by Florida International University
- **Gold medalist** in School university tie up **Entrepreneurship program** by **Bharathidasan University**
- **State Rank 60**, Silverzone Informatics Olympiad
- Hudson River Trading **Biopic Tech Conference** scholar
- **Microsoft Technolgy Associate (MTA)** certification in python programming