Naresh Kumar Kaushal

📞 +1 (530)231-0413 | ✉ nkkaushal@ucdavis.edu | in LinkedIn | ⬤ Github | 🌐 Portfolio | Davis, California

EDUCATION

University of California, Davis (UC Davis)	**Davis, California**
Master of Science in Computer Science **GPA: 3.92/4.0**	Sept 2022 – Apr 2024
Indian Institute Of Technology Goa (IIT GOA)	**Goa, India**
Bachelor of Technology in Computer Science and Engineering **GPA: 3.87/4.0**	Aug 2017 – May 2021

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, JavaScript, C#

Database and Web Development: React.js, Node.js, MongoDB, Express, Modal View Controller framework, HTML5, Cascading Style Sheets (CSS), MySQL, jQuery, Spring framework, Postman, REST API's, .NET framework, Maven

Others: Linux, Git, Keras, PyTorch, Tensorflow, Signal processing, Machine learning, JIRA, Jenkins, Software Development

WORK EXPERIENCE

University Of California Davis Link 🔗   **Davis, California**

Graduate Student Researcher   April 2023 – Present

- Leading ongoing research at Center For Mind And Brain in collaboration with Accenture labs as Machine Learning Researcher to develop a non-invasive multimodal silent speech interface (SSI) for patients with Dysarthria
- Implemented a **supervised** model to generate **Hu-BERT** speech units by decoding sEMG signals using **CNN-RNN** and **attention** based **transformer** model achieving a WER of **35%**
- Working to incorporate multimodal strategy combining sEMG signals, audio, and video (lipreading) to reduce the phoneme confusions and improve WER

WOAS Technology Pvt. Ltd. (Wooqer)   **Bangalore, India**

Associate Product Engineer   Jun 2021 – Apr 2022

- Spearheaded a **web-development** team to design an interactive gallery using **Spring MVC framework** with a new feature of point annotation and commenting, improving customer engagement by **45%**
- Designed new **APIs** and optimized existing ones to revamp Wooqer mobile app **(Android and iOS)** resulting in **25%** reduction in critical response times
- Resolved multiple product-related errors tracked in **JIRA** through close collaboration with the Customer Success and Quality Assurance teams

Planful (Host Analytics)   **Telangana, India**

Software Developer Engineer - 1 Intern   June 2020 – Dec 2020

- Designed a **.NET console app** in **C#** and **MySQL** to identify anomalies in financial data and assign quality scores, reducing prediction errors in financial planning models by **40%**
- Collaborated with senior developers to debug code using **NUnit framework**, resolving **30+** pending issues on **JIRA** and documented code for future KT sessions

PROJECTS

Web platform for Indian Community at UC Davis (ICD) Link 🔗   Nov 2023 - Present

- Led a team of four in developing a **MERN**-stack web application using MVC approach for UC Davis' Indian student community and promoting open-source collaboration to enhance and evolve the project
- Engineered key features such as roommate search, event management, and housing assistance aimed at enriching the UC Davis Indian student community experience

Omdena real world AI Challenge Link 🔗   Nov 2021 - Jan 2022

- Led pre-processing team to develop a U-Net or Convolutional Autoencoder model to denoise driver's speech for voice assistant software
- Enhanced speech intelligibility by integrating a language model, achieving a **0.33%** word error rate, and feeding the improved output to a RASA-based chatbot

Feature Selection using deep learning (Btech Capstone Project) Link 🔗   Jan 2021 - May 2021

- Developed a supervised model for classifying High Dimension Low Sample Size (HDLSS) cancer data using mRNA-Seq gene expression values of patients with different molecular subtypes
- Applied boosting, greedy feature selection, PCA, and Deep Neural Networks (DNN) to overcome the challenges of high variance and overfitting in HDLSS data, achieving an accuracy of approximately **90%**

AWARDS AND LEADERSHIP

- Garnered CITRIS funding for the 'Silent Speech' project at UC Davis, recognized for its innovative approach in information technology research benefiting society
- Served as a teaching assistant for Introduction to programming to lead discussion sessions and lab
- Awarded institute Bronze medal for second rank in CS department of IIT-GOA 2017 batch