

Naresh Kumar Kaushal

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EDUCATION

University of California, Davis (UC Davis)

Master of Science in Computer Science **GPA: 3.93/4.0**

Davis, California

Sept 2022 – May 2024

Indian Institute Of Technology Goa (IIT GOA)

Bachelor of Technology in Computer Science and Engineering **GPA: 3.9/4.0**

Goa, India

Aug 2017 – May 2021

TECHNICAL SKILLS

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

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

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

WORK EXPERIENCE

Indian Student Association @ UC Davis [Link](#)

Davis, California

Software Developer - part time

Nov 2023 – Present

- Co-founded and leading the development of full-stack web application using **React.js**, **MongoDB** and **Node.js** aimed at enhancing academic and social experience of student community at UC Davis.
- Implemented features like roommate finder with **dynamic matching algorithm**; and currently working on event calendar and tailored recommendations.
- Designed and implemented secure, efficient **RESTful APIs** with **Node.js** and **Express.js**, optimizing data retrieval through **hybrid pagination**, ensuring minimal response times even with large data.

WOAS Technology Pvt. Ltd. (Wooqer)

Bangalore, India

Associate Product Engineer

Jun 2021 – May 2022

- Spearheaded a scrum team in the development of an interactive gallery, using **Java**, **HTML**, **CSS** and **Spring MVC** framework, resulting in a **45%** increase in user engagement through enhanced UI and optimized **MySQL** queries
- Designed new **RESTful APIs** and optimized existing ones to revamp Wooqer mobile app (**Android and iOS**) resulting in **25%** reduction in critical response times
- Effectively resolved over **100+** product-related issues tracked in JIRA, leading to a significant reduction in customer complaints and contributing to the product's overall stability and reliability.

Planful (Host Analytics)

Telangana, India

Software Developer Engineer - 1 Intern

June 2020 – Dec 2020

- Developed a **.NET** console application in **C#** and integrated it with **MySQL** to automate anomaly detection in financial data, enhancing data accuracy and 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

Exploring Factors influencing US politics [Link](#)

- Utilized diverse set of **APIs**, **selenium** tool and scraping techniques for data extraction from subreddits, demographic databases, and news sources, consolidating into a single **SQLite** database for in-depth political analysis.
- Implemented **Linear Regression** to explore the relationship between demographic factors and sentiments on various topics and visualized these insights using **JavaScript** and **Python's** Dash application.
- Employed **Latent Dirichlet Allocation (LDA)** for thematic analysis of news content across the political spectrum, revealing linguistic patterns and potential biases impacting public opinion.

Silent Speech Interface (SSI) for patients with speech disorder [Link](#)

- Conducted a successful **clinical study** to investigate the feasibility of **generating speech** in laryngectomy patients through a **non-invasive** Silent Speech Interface (SSI), utilizing **sEMG signals** from facial muscles without the reliance on audio data.
- Engineered an advanced supervised learning model that synthesizes speech from sEMG and lipreading, employing a novel combination of **CNN-RNN** and **attention-based Seq-to-Seq** architectures, achieving a **15% WER**
- Orchestrated clinical trials with laryngectomy patients, devising **Python** scripts for the recording and **synchronization** of **sEMG signals** and visual data.

Enhancing driver voice assistant software to help reduce road accidents (Omdena AI challenge) [Link](#)

- Led pre-processing team to develop a U-Net/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

AWARDS AND LEADERSHIP

- Secured CITRIS funding for the 'Silent Speech' project, earning recognition for leveraging IT research to address societal challenges.
- Received the prestigious Bronze medal at IIT-GOA for securing the second rank in the CS department.