Naresh Kumar Kaushal

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WORK EXPERIENCE

Center For Mind And Brain (CMB) Link ↗   Davis, California
Graduate Student Researcher | *Python · Signal Processing · Machine Learning · Speech Anatomy*   April 2023 – Present

- Leading ongoing research at Center For Mind And Brain to develop a non-invasive silent speech interface for patients with Dyarthria.
- Conducted literature review and analysis of existing models for silent speech interfaces to identify key challenges and opportunities for improvement.
- Achieved promising initial results of clustering phonemes from sEMG signals and exploring machine-learning and geometric deep-learning techniques to generate coherent speech and preserving prosody.

WOAS Technology Pvt. Ltd. (Wooqer)   Bangalore, India
Associate Product Engineer | *Java · Spring Framework · JavaScript · CSS · MySQL · HTML*   Jun 2021 – Apr 2022

- Spearheaded the project to design a gallery with the feature of providing contextual feedback on images and sending context-based notifications.
- Improved customer engagement by 45% through the implementation of new visual merchandising features in the gallery, benefiting Lenskart and other retail stores.
- Contributed as a back-end developer to improve the Wooqer mobile app (Android and iOS) by designing new APIs and optimizing existing ones, making it more dynamic and efficient.
- Resolved product-related errors faced by customers in collaboration with the customer success and quality assurance teams.

Planful (Host Analytics)   Telangana, India
Software Developer Engineer - 1 Intern | *C# · MySQL · Git · Object Oriented Programming*   June 2020 – Dec 2020

- Developed a data quality assessment tool to capture anomalies in financial data, assign a quality score, and to provide customers with valuable insights and predictions.
- Utilized the tool to detect sparse datasets, datasets with high fluctuations, and datasets with inconsistent values.
- Contributed to debugging and testing efforts, resolving pending issues on JIRA and documenting the code and to assist new team members during the on-boarding process.

TECHNICAL SKILLS

Programming Languages: C++, Python, Java, JavaScript
Database and Web Development: React, HTML, CSS, MySQL, Spring Framework, Postman, REST API's
Others: Git, Keras, PyTorch, Signal processing, Machine Learning

EDUCATION

University of California, Davis (UC Davis)   Davis, California
Master of Science in Computer Science **GPA: 3.9/4**   Sept 2022 – May 2024

Indian Institute Of Technology Goa (IIT GOA)   Goa, India
Bachelor of Technology in Computer Science and Engineering **GPA: 9.17/10**   Aug 2017 – May 2021
(Institute Bronze Medalist)

PROJECTS

Omdena real world AI Project Link ↗ *Python · Keras · Audio Processing · Deep Learning*   Nov 2021 - Jan 2022

- Collaborated with Consenz and 40 global contributors in the Omdena AI challenge, enhancing driver voice assistance to reduce road accidents.
- Led pre-processing team, developing a U-Net or Convolutional Autoencoder (with skip connections) model to enhance speech quality for driver voice assistance.
- Significantly lowered word error rate by denoising low SNR audio files and improved overall speech quality.

Feature Selection using deep learning (Btech Thesis) Link ↗ *Python · Keras · Deep Learning*   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.
- Attained an accuracy of approximately 90%.