GIRISH KOUSHIK

Guildford, United Kingdom

g.koushik@surrey.ac.uk ⬦ LinkedIn ⬦ GitHub

EDUCATION

PhD in Computer Science 2023 – 2027
University of Surrey *Guildford, United Kingdom*

- Multimodal framework for Hate Speech Detection on Social Media Platforms - supervised by Dr. Diptesh Kanojia.

MSc in Advanced Computer Science with Artificial Intelligence 2022 – 2023
University of Strathclyde *Glasgow, United Kingdom*

- Relevant Coursework: Deep Learning for Visual Computing Applications, Game Theory & Multi-Agent Systems, Reasoning for Intelligent Agents, Evolutionary Computation for Finance.

BE in Electronics and Communication Engineering 2015 – 2019
R.V. College of Engineering (RVCE) *Bengaluru, India*
Affiliated to Visvesvaraya Technological University (VTU)

- Relevant Coursework: Analog Microelectronics, Digital Logic Design, Artificial Neural Networks, Communication Systems, Microwave & Radiation Systems.

EXPERIENCE

Teaching Assistant in 'Natural Language Processing' Feb 2024 – Present
University of Surrey *Guildford, United Kingdom*

- Laboratory demonstrator for postgraduates in COMM061 Natural Language Processing, taught by Dr. Diptesh Kanojia.

Teaching Assistant in 'Foundations of AI' Jan 2023 – Mar 2023
University of Strathclyde *Glasgow, United Kingdom*

- Laboratory demonstrator for Year 3 undergraduates in CS310 Foundations of AI, taught by Dr. Andrew Abel.
- Topics covered: Search Trees, Game Trees, Logic & Planning, and Neural Networks.

Software Development Engineer (AI/ML) Jan 2021 – Aug 2022
Diatoz Solutions Private Limited *Bengaluru, India*

- Development: AI/ML and NLP models.
  - Developed and deployed models for 'e2eHiring', a candidate recruitment platform.
  - Added features: smart hire, candidate and job recommendation system, assessment module, resume parsing service, online video proctoring model.
  - ML open-source contribution: added a feature for haystack (*deepset.ai*).
- Mentorship: trained two interns on machine learning and deep learning.
- Integration: facilitated cross-team collaboration between the AI/ML team and the back-end team.

TECHNICAL SKILLS

Programming Languages and Databases	Python, R, SQLite, MongoDB
Applications and Services	Git, AWS, Docker
Frameworks and Tools	TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas
Operating Systems	Windows, Linux

PROJECTS

Multistream Audiovisual Speech Recognition   Final project at University of Strathclyde
- Investigated compact Gabor filter features for visual speech recognition on a challenging large-vocabulary continuous speech dataset (LRS2).
- Developed and evaluated CNN, RNN and transformer models using Gabor features for viseme classification and sequence-to-sequence prediction.
- Analysis provided insights into trade-offs between engineered intuitive features like Gabor filters versus learned representations for audiovisual speech recognition.

Smart Hire   Diatoz Solutions/e2eHiring
- NLP model development to evaluate job-seeking candidates on technical skills (Python, C++, etc.) using their interview videos.
- Achieved 80% accuracy and reduced inference time to $\sim$20 seconds per interview.

Assessment Module   Diatoz Solutions/e2eHiring
- NLP model designed to train and test employees on specific product/service documents.
- Built and fine-tuned a custom Question Answering model for parsing and querying huge product-related documents.
- Created data sets for semantic textual similarity and question-answering tasks alone.

Resume Parser   Diatoz Solutions/e2eHiring
- Created an API service for parsing candidate resumés in bulk.
- Used NLP techniques to extract relevant information such as name, contact details, education, skills, work experience, etc., from various formats of resumés.
- Reduced the execution time to less than 120 seconds for 50 resumés.

Recommendation System   Diatoz Solutions/e2eHiring
- Built a simple candidate and job recommendation system to match resumes and job descriptions.
- Used various similarity measures and ranking algorithms to provide personalized and relevant recommendations to both candidates and employers.

Video Proctor   Diatoz Solutions/e2eHiring
- Built an online video proctoring model using computer vision to monitor the candidates while taking online job interviews and integrated it with the 'e2eHiring' interview room.
- Used OpenCV, TensorFlow and AWS S3 to implement the model.
- Improved the security and credibility of the online interview process.

AWARDS AND ACHIEVEMENTS

- Member of the "StrathClust" Team that participated in the CIUK 2023 Cluster Challenge representing the University of Strathclyde and secured third place.

- Awarded 'Faculty of Science' Scholarship to pursue MSc at the University of Strathclyde (2022 − 2023).

- Received 'Pat-On-Back' Award for excellent project performance, Diatoz Solutions (May 2021, July 2022).

- Awarded 'Best Sportsperson' consecutively for four years in RVCE (2015 − 2019).

- 63rd Chess Grandmaster from India, conferred in 2019 by the International Chess Federation (FIDE); also won several international medals like the Silver Medal in the World Youth Chess Olympiad and Gold Medal in the Asian and National Youth Championships.

- Awarded 'The Junior Sportsperson of the Year' by the 'Sportswriters Association of Bengaluru' (2013).

- Bagged the prestigious 'Ekalavya' Award by the State Government of Karnataka in the sports category (2008).

REFERENCES ARE AVAILABLE ON REQUEST