BHASKAR GANESH DEVALLA

+853 6209 6078 | devallabhaskarganesh@gmail.com | dbhaskarganesh.me

in Devalla Bhaskar Ganesh | ⭘ dbhaskarganesh | iD Devalla Bhaskar Ganesh | Scopus˙ Devalla Bhaskar Ganesh

Macau SAR,China

OBJECTIVE

Seeking a challenging position in Natural Language Processing and Speech Recognition to leverage my expertise in machine learning, deep learning, and linguistic data analysis. Aiming to contribute to innovative projects at the intersection of AI-driven language technologies and practical problem solving in fields such as speech understanding, conversational AI, and low-resource language processing.

EXPERIENCE

• **University of Macau [⊕]**   *September 2025 - Present*
Teaching Assistant   Macao SAR,China
  ◦ Facilitating *weekly tutorial sessions* for 80+ students, actively resolving *conceptual doubts in discrete mathematics* to reinforce lecture material.
  ◦ Evaluating *student assignments and quizzes* with detailed feedback, maintaining *consistent grading standards* across tutorial sections.
  ◦ Developing *supplementary problem sets and solution walkthroughs*, enhancing *student preparedness for assessments*.
  ◦ Collaborating with course instructor to refine *tutorial content and grading workflows*, ensuring *alignment with course learning objectives*.

• **Natural Language Processing & Portuguese-Chinese Machine Translation Laboratory [⊕]**   *March,2024 –Present*
Research Assistant   Macao SAR,China
  ◦ Engineered advanced LLM solutions, enhancing *NLP task accuracy* by **15%** in multilingual translation tasks.
  ◦ Developed a scalable LLM optimization framework, boosting *task efficiency* by **20%** and accelerating *research workflows* by **30%**.
  ◦ Conducted cross-lingual LLM benchmarking, achieving *12% higher performance* in low-resource language pairs.

EDUCATION

• **University of Macau**   *August 2025 - Present*
Master of Science in Computer Science   Macao SAR, China
• **Koneru Lakshmaiah Education Foundation (KL University)**   *August 2021 - May 2025*
Bachelor of Technology in Computer Science and Engineering(Honors)   Guntur,India
  ◦ GPA: 9.00/10.00

PROJECTS

• **Emotion Aid:Emotion Speech Recognition for Disorder Speech**   *August 2023 - December 2023*
Tools:Python,Flask, TensorFlow, Scikit-learn,Librosa,pydub,MySQL,Matplotlib, Seaborn   [⭘]
  ◦ Developed an intelligent emotion recognition system tailored for **disordered speech**, enabling accurate detection of emotional states from impaired vocal inputs.
  ◦ Integrated **machine learning models** like SVM and CNN, trained on clinical speech datasets to classify emotions with improved robustness and reliability.
  ◦ Implemented **real-time audio feature extraction** using MFCCs, pitch, and tone analysis to support dynamic emotion detection during speech.
  ◦ Designed an intuitive and **therapist-friendly interface**, providing visual feedback of emotional trends to aid in clinical assessment and therapy planning.

• **King of Karaoke:Android Music Quiz with Real-Time Audio and Lyrics Recognition**   *March 2024-May 2024*
Tools: Android (Java), Auth0, MediaPlayer API,Glide,JSONBin API,SDP and SSP Libraries   [⭘]
  ◦ Developed a **fun and interactive music quiz app**, achieving an engaging **single-player experience** with features like **song title, artist, and album guessing** based on lyrics and audio snippets.
  ◦ Implemented **audio integration**, processing **real-time song snippets** for music playback and dynamic updates of songs via an **online database** using **JSONBin API**.
  ◦ Created a **responsive UI** for **dynamic scaling** using **SDP & SSP libraries**, ensuring the app adapts seamlessly to different screen sizes and resolutions.
  ◦ Developed a **secure authentication system** using **Auth0**, allowing easy integration with various platforms for user login and quiz participation.

PUBLICATIONS

[C.1] Ganesh, D. B., Pachipala, Y., Rizvi, S. S., Manne, T. C., Atchi, H. S., & Rao, V. M. (2024). **Flask-based ASR for automated disorder speech recognition**. In *Procedia Computer Science*, pp. 623–637. Elsevier. 2024, India.
DOI: 10.1016/j.procs.2024.03.252

[C.2] Ganesh, D. B., Prasanth, B., Chowdary, M. T., Avala, V. S., & Gangashetty, S. V. (2024, January). **Emotion Speech Recognition in the Cloud**. In *2024 2nd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT)*, pp. 1033–1039. IEEE. January 2024, India.
DOI: 10.1109/IDCIoT59759.2024.10467842

[C.3] Ganesh, D. B., Nilesh, D., Reddy, C. V. S. T., Reddy, J. H., Gangashetty, S. V., & Vurukonda, N. (2024, December). **Reinforcement Learning for Resource Allocation in Edge Computing: Challenges and Future Directions**. In *2024 International Conference on Sustainable Communication Networks and Application (ICSCNA)*, pp. 930–936. IEEE. December 2024, India.
DOI: 10.1109/ICSCNA63714.2024.10864001

[C.4] Ganesh, D. B., Chowdary, P. E., Nilesh, D., Reddy, J. H., Reddy, C. V. S. T., & Gangashetty, S. V. (2025, February). **Advances in Machine Translation: A Comprehensive Survey of Large Language Models**. In *2025 3rd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT)*, pp. 1671–1675. IEEE. February 2025, India.
DOI: 10.1109/IDCIOT64235.2025.10914769

SKILLS

- **Programming Languages:** Python, C++, Java, Julia, Bash
- **Web Development:** HTML5, CSS3, JavaScript, React.js, FastAPI, Flask, WebSockets
- **Database Systems:** PostgreSQL, MySQL, MongoDB, SQLite, Apache Lucene, ElasticSearch
- **Data Science & Machine Learning:** NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Hugging Face Transformers, OpenNMT, Fairseq, SpeechBrain, ESPnet, DeepSpeech, NLTK, SpaCy, AllenNLP
- **Cloud Platforms:** Alibaba Cloud, Google Cloud Platform (GCP), Amazon Web Services, Microsoft Azure
- **DevOps & Version Control:** Git, GitHub, GitLab, Docker, Kubernetes, MLflow, Weights & Biases
- **Specialized Technologies:** BERT, RoBERTa, GPT models, Whisper, Tacotron2, WaveGlow, Transformer/Seq2Seq architectures, Byte Pair Encoding (BPE), SentencePiece, BLEU, WER, ROUGE, Kaldi
- **Mathematical & Statistical Tools:** MATLAB, Octave, R, LaTeX, SciPy, SymPy, OpenCV
- **Other Tools:** Jupyter Notebooks, Google Colab, VSCode, PyCharm, TensorBoard, WandB, Streamlit, Gradio
- **Research & Academic Skills:** Literature Review, Comparative Analysis, Reproducibility, Benchmarking, Dataset Preprocessing, Curation, Academic Writing, Experiment Design, Model Evaluation, Open-source Collaboration

HONORS AND AWARDS

- **Certificate of Appreciation** *March 2023*
  Focus-Official Student Governance Body [🌐]
  ◦ Certificate of Appreciation from FOCUS, the official student governance body of the Department of CSE (Hons.) & CSE, awarded for exceptional dedication and leadership as Lead in Academics & Skill Development Committee.
  ◦ Recognized for significant contributions to academic and skill development initiatives, highlighting strong organizational skills, initiative ownership, and impact on peer learning and engagement during B.Tech studies.

- **Certificate of Appreciation** *May 2023*
  #INCLUDE 2023-A National Level Techno Festa [🌐]
  ◦ Certificate of Appreciation awarded by #INCLUDE 2023, a National Level Techno Fiesta, in recognition of exceptional contributions as Co-Ordinator in the Technical Events Committee.
  ◦ Recognized for instrumental role in the successful execution of #INCLUDE 2023, highlighting organizational skills, teamwork, and initiative ownership at a national-level academic event.

LEADERSHIP EXPERIENCE

- **Teaching Assistant(Peer Mentor)** *September 2022 - December 2024*
  Koneru Lakshmaiah Education Foundation(KL University) [🌐]
  ◦ As Head of Peer Mentors for Cloud and Edge Computing, I led student support efforts and worked as a Teaching Assistant in Computer Networks, Software Engineering, Python with Django, and cloud technologies.
  ◦ My efforts led to improved academic performance, with over 75 percent of students gaining better understanding and lab results, and higher engagement in project-based learning.
  ◦ I launched a peer mentoring program, held regular revision sessions, and worked with faculty to add practical case studies and mini-projects.

- **Director and Advisor for Academics and Skill Development Wing** *September 2022 - May 2025*

  Focus-Official Student Body [⊕]

  ◦ I served as Director and Advisor of the Academics and Skill Development Wing at KL University, leading initiatives to improve academics and student skill development.

  ◦ During my tenure, the wing successfully organized multiple workshops and training sessions, resulting in increased student participation and measurable improvements in skill levels across the department.

  ◦ I initiated various academic enrichment programs and skill-building activities, fostering a culture of continuous learning and professional growth before resigning from the position.

VOLUNTEER EXPERIENCE

- **Technical Events Coordinator** *March 2023 - May 2023*

  #INCLUDE 2023-A National Level Techno Festa [⊕]

  ◦ I worked as the Coordinator for Technical Events at Hash Include 2023, organizing and managing technical competitions and workshops under the Department of Computer Science at KL University.

  ◦ My coordination contributed to the smooth execution of the events, leading to high participant satisfaction and engagement. For my efforts, I was awarded the Best Technical Events Coordinator.

  ◦ I developed strong organizational, leadership, and communication skills while managing event logistics, coordinating teams, and ensuring timely delivery of activities.

- **Anti-Ragging Committee Member** *August 2024 - May 2025*

  Koneru Lakshmaiah Education Foundation [⊕]

  ◦ I served as a Member of the Anti-Ragging Committee at KL University, actively contributing to creating a safe, inclusive, and respectful campus environment.

  ◦ I participated in awareness drives, student orientation sessions, and regular inspections to prevent ragging-related incidents and ensure compliance with university policies.

  ◦ Through this role, I developed strong interpersonal, conflict-resolution, and vigilance skills while promoting student well-being and campus harmony.

PROFESSIONAL MEMBERSHIPS

- **Association for Computational Linguistics(ACL)** *March 2025 – Present*
- **International Speech Communication Association(ISCA)** *March 2025 – Present*

CERTIFICATIONS

- **Juniper Networks Certified Associate, Junos (JNCIA-Junos)** *November 2022*
- **Google Cloud Certified Associate Cloud Engineer** *November 2023*
- **Amazon Web Services Cloud Practitioner** *June 2024*
- **Automation Anywhere Certified Essentials RPA Professional Automation 360 - 2023** *August 2024*
- **Amazon Web Services Solutions Architect - Associate** *November 2024*

ADDITIONAL INFORMATION

Languages: English (Advanced), Hindi (Fluent), Telugu (Fluent) , Mandarin (Basic)
Interests: Open Source Contribution , Reading Non-fiction , Fitness and Personal Development , Volunteering

REFERENCES

1. **Derek Fai Wong**
   Associate Professor, Faculty of Science and Technology
   University of Macau
   Email: derekfw@um.edu.mo
   Phone: +853 6687 0756
   Relationship: Research Advisor , Professor

2. **Suryakanth Veerashetty Gangashetty**
   Professor, Department of Computer Science and Engineering
   Koneru Lakshmaiah Education Foundation (KL University)
   Email: svg@kluniversity.in
   Phone: +91 94948 38278
   Relationship: Research Advisor

3. **Nilu Singh**
   Associate Professor, Department of Computer Science and Engineering
   Koneru Lakshmaiah Education Foundation (KL University)
   Email: drnilusingh@kluniversity.in
   Phone: +91 83184 59617
   Relationship: Professor