Megha Parikh, MPhil, PhD

Postdoctoral Scholar
Healthy Aging Laboratory
University of Central Florida College of Nursing
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EDUCATION

Doctor of Philosophy (Computer Science) Jun 2018 - Jul 2023
Veer Narmad South Gujarat University, Surat, India

Master of Philosophy (Computer Science) May 2013 - Apr 2018
Veer Narmad South Gujarat University, Surat, India

RESEARCH PROJECTS

Recognition of Frequently used Handwritten Gujarati Conjuncts Jun 2018 - Jul 2023
System Analyst & Developer

- Implemented a novel ConvNet model using Grid search and Bayesian Optimization to recognize handwritten conjuncts of Gujarati script
- Compared the results of the proposed model against state-of-the-art convolutional neural network architectures, including AlexNet, GoogLeNet, Inception V3, and ResNet50
- Achieved a maximum recognition accuracy of 95%
- Research study focused on the design, analysis, implementation, and experimental evaluation of algorithm

Segmentation of Frequently used Handwritten Gujarati Conjuncts May 2013 - Apr 2018
System Analyst & Developer

- Designed and developed a segmentation model for handwritten Gujarati conjuncts
- Created a first-of-its-kind dataset with over 45,000 sample images of handwritten Gujarati conjuncts
- Achieved promising segmentation accuracy against the dataset, marking one of the earliest initiatives exclusively for the Gujarati script

MINOR RESEARCH PROJECTS

- Liver Cirrhosis Stage Identification
- Automated Pneumonia Detection from Chest X-Ray Images
- Predictive Modeling for Thyroid Disease Diagnosis
- Machine Learning-based Diamond Price Prediction

BOOK

M. Parikh, B. Patel; SQL PL/SQL for Oracle 9i; New Popular Prakashan; Surat, India; 2015; 1st edition

CERTIFICATIONS

- Build and Operate Machine Learning Solutions with Azure (Coursera, Microsoft) Oct 2023
- Foundations: Data, Data, Everywhere (Coursera, Google) Sep 2023
- Intro to Analytic Thinking, Data Science, and Data Mining (Coursera, University of California, Irvine) Sep 2023
- Deep Learning Applications for Computer Vision (Coursera, University of Colorado Boulder) Jul 2023
- Text Mining and Analytics (Coursera, University of Illinois at Urbana-Champaign) Jun 2023

RESEARCH APPOINTMENT

Postdoctoral Scholar Jan 2026 - Present
University of Central Florida, Orlando, FL, USA

ACADEMIC APPOINTMENT

Assistant Professor

T. & M. T. College of Information Science, Surat, India

- In charge of conducting theoretical and practical sessions for areas including Mathematics, Operating Systems, Relational Database Management System, Web Designing
- Mentored 100+ students in their B.C.A. final year projects
- Appointed as an examiner and paper setter for the assessment of the university theory and practical examinations for the B.C.A. and B.Sc. (I.T.) courses, as well as for the evaluation of the final year projects
- Managed committees like Social and Cultural Activities, Tour, Magazine, Sports for the overall development of the students at the college level as a coordinator. Conducted college-level programming competitions and national-level quiz competitions as a part of extracurricular activity

COMMITTEE CHAIRMANSHIP AND MEMBERSHIP

- Internal Quality Assurance Cell (IQAC)
- Cell for Women Grievances
- Designated officer for voting related activities
- SC/ST Cell/15883/19
- Social and Cultural Activity committee
- Planning forum committee
- Literary, Debate and Elocution activity committee
- Gymkhana Committee
- Anti-ragging Monitoring Cell
- Assistant Apprentice Officer

PUBLICATIONS

- M. Parikh and A. Desai, "Segmentation of Frequently Used Handwritten Gujarati Conjunctive Alphabet," 2019 5th International Conference on Computing, Communication, Control and Automation (ICCUBEA), 2019, pp. 1–6. https://doi.org/10.1109/ICCUBEA47591.2019.9128510.
  Award: Best Paper of the Session
- M. Parikh and A. Desai, “Recognition of Handwritten Gujarati Conjuncts using the Convolutional Neural Network Architectures: AlexNet, GoogLeNet, Inception V3, and ResNet50”, In: Singh, M., Tyagi, V., Gupta, P.K., Flusser, J., Ören, T. (eds) Advances in Computing and Data Sciences. ICACDS 2022. Communications in Computer and Information Science, vol 1614, pp. 291–303. Springer, Cham, 2022. https://doi.org/10.1007/978-3-031-12641-3_24.
- M. Parikh and A. Desai, “Comparative analysis, classification, and segmentation of the handwritten Gujarati conjuncts depending on the structural properties of the constituent characters”, e-Prime - Advances in Electrical Engineering, Electronics and Energy, vol 5, 2023, 100272, ISSN 2772-6711. https://doi.org/10.1016/j.prime.2023.100272.
- M. Parikh and A. Desai, “A Novel ConvNet Architecture for Recognizing Offline Handwritten Gujarati Conjuncts”, In: Roy, S., Sinwar, D., Dey, N., Perumal, T., R. S. Tavares, J.M. (eds) Innovations in Computational Intelligence and Computer Vision. ICICV 2024. Lecture Notes in Networks and Systems, vol 1116, pp. 273–289. Springer, Singapore. https://doi.org/10.1007/978-981-97-6995-7_21.

AWARD

Best Paper of the Session Sep 2019
2019 5th International Conference on Computing, Communication, Control and Automation (ICCUBEA)
Technically Co-sponsored By IEEE – Pune Section