

EDUCATION

PhD Computer Science, Cognitive Science and Neuroscience University of Colorado Boulder Thesis: Ablation studies to identify functionally specific units in deep neural networks pre-trained on object recognition	Dec 2021 GPA: 3.96/4.0
MS Computer Science University of Colorado Boulder	May 2017 GPA: 3.86/4.0
BTech Computer Science (with distinction) Amrita School of Engineering, Coimbatore, India	May 2014 GPA: 8.79/10.0

SKILLS

Deep learning: model interpretability, computer vision, natural language processing (NLP), statistical analysis and data science -> Pytorch, Spacy, Keras, Tensorflow, Dask, CUDA
Machine learning: clustering, statistical modeling, regression, pattern recognition and classification -> Numpy, Nilearn, Scikit-learn, Pandas, NLTK, Scipy
Dev Ops: container computing, data pipeline and automation -> AWS EC2, S3, ECS, ECR, DynamoDB, Lambda, Amazon Fargate, Docker, Git
Programming / Scripting -> Python, C/C++, Java, Linux BASH, SQL, UNIX, R
Data visualization -> Matplotlib, Seaborn, Tensorboard, Inkscape, Tableau
Project management: agile development, user stories and documentation -> JIRA, Trello, Asana, Github projects, LaTeX

EXPERIENCE

- Graduate Research Assistant** — University of Colorado Boulder Aug 2017 - May 2021
- Cleaned and pre-processed large real-world classroom transcript dataset with more than 150,000 sentences.
 - Formulated baseline deep learning model for supervised classification of teacher discourse strategies with F1 score of 65%.
 - Boosted performance from 65% to 80% using data-driven domain based features and state-of-the-art transformer models.
 - Managed strict project timeline successfully by coordinating virtual meetings and presenting findings in top-tier peer-reviewed conferences including EAAI/AAAI and IEEE Big data.
 - Supervised integration of pre-trained model into the big data framework using Amazon Web Services (AWS).
- Data Scientist Intern** — CaliberMind, Boulder, Colorado May 2017 - Aug 2017
- Designed and evaluated experiments to create user personas for business to business (B2B) sales and marketing with information retrieval, statistics and data mining (Psychographics modeling and analysis with data visualization).
- Research Assistant** — University of Colorado Boulder Aug 2015 - May 2016
- Formulated, tested and revised many hypotheses for clustering functional brain activation response for behavioral tasks.
- Research and Development Software Engineer** — Siemens PL, Chennai, India May 2014 - Aug 2015
- Designed domain specific programming language to transform code into MATLAB simulink models.
 - Developed and independently initiated a technical workshop program for new team members resulting in a significant reduction in training time.

PROJECTS

Music genre classification - Implemented statistical machine learning algorithms to predict music genre from audio signal. Systematic feature extraction by incorporating domain knowledge along with extensive tuning and testing helped boost performance from 56% to 65%.

MIT App inventor- Built a prototype to add search block feature to MIT app inventor for Google summer of code. Created detailed documentation in digital as well as written form.

Product reviews helpfulness prediction using deep learning - Designed a LSTM Model to predict helpfulness ratings of yelp and amazon reviews with performance up to 74%.

AWARDS

New and future AI educator award at AAAI/EAAI 2019 (Advances in Artificial Intelligence).
Second prize in Brain data bank challenge at IEEE Big Data Governance and Metadata Management (BDGMM) workshop, 2018 for designing a variational auto-encoder to predicting cognitive performance in older adults from EEG data.