Shivani Modi

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EDUCATION

Columbia University   New York, NY
MS in Data Science, GPA 3.72   May 2022
Courses: Machine Learning, Computation Optimization, Computer Vision, Data Analysis and Visualization, Algorithms

Manipal Institute of Technology   Manipal, IN
BTech in Computer Science, GPA 8.72/10   Jul 2018
Minor: Information Management and Analytics
Courses: Data Structure, Database Systems, Big Data, Business Intelligence, Data Warehousing and Mining, Information Retrieval

WORK EXPERIENCE

IBM   New York, NY
Cognitive Engineer Consultant - Data Scientist   Jun 2021 - Present
- Build and optimise topic models on experiential data of customer experience to drive strategic and operational decision making
- Administered statistic methods and hypothesis testing to determine sampling methodology for a representative sample

SAP Labs India   Bangalore, IN
Data Scientist   Jul 2018 - Dec 2020
- Built a chatbot to automate business processes in Contract to Revenue area. (Conversational AI, Python, CoPilot)
- Designed a model to convert legal contract PDF files into a digitized format saving 300k Euros annually. Nominated for SAP's highest employee recognition - the Hasso Plattner Founders Award . (Python, Cloud Foundry, SAP Fiori, Docker)
- Implemented a RNN with LSTM cells to predict glucose levels from a patient's ECG, breathing, and physical activity
- Represented a team of 40 members as SAP catalyst, Employee Training, participated in lateral hiring and received fellowship
Data Science Intern   Jan 2018 - Jun 2018
- Formulated and executed a recommendation system by using one-shot learning, deep learning and NLP stack for service requisition process. (Siamese Network, word2vec, LSTM)
- Designed an offline module to compute feature space representation and reduced runtime to 2 seconds by using broadcasting
- Integrated model in guided buying system using AngularJS, Maven, and REST calls

AMAZON   Bangalore, IN
Intern   May 2017 - Jun 2017
- Researched on pricing data collection, retrieval, and indexes for data warehousing on AWS platforms
- Developed a module to automate loading of data from cloud storage S3 to Redshift using Python

LANGUAGE AND IT SKILLS

LANGUAGES: C, C++, Python, R, HTML, CSS, PHP, OpenCL, SQL
TECHNOLOGIES: Conversational AI, Github, CUDA, ROS, HANA PAL, AWS, MongoDB, Weka, Docker
LIBRARIES: Fast AI, Tensorflow, PyTorch, Keras, Scikit-Learn, Numpy, Pandas, OpenCV, Flask

RESEARCH EXPERIENCE AND PROJECTS

Columbia Department of Psychiatry and New York State Psychiatric Institute   Feb 2021 - Present
- Investigating how serotonin alterations in early life shape emotions during adolescent period
- Developing CNN models to extract features from motion and classify them into behaviors to study behavioral patterns of animals

Fast Constrained Submodular Maximization, Movie Recommendation   Feb 2021
- Implemented extension of greedy algorithms subjected to constraints for maximising submodular function for movie recommendation

Antwak   Sep 2020 - Dec 2020
- Collaborating as an expert through video talks and other Engagement models
- Created 30 videos spanning across OCR, NLP, image processing and problem solving techniques

Scientific Fact Checking   Oct 2020
- Devised a module for verification of claims related to biomedicine
- Constructed a pipeline for sentence selection (Sentence-Bert encodings), rationale selection (Bert and semantic role modeling) and classification model. (Siamese Architecture) to assign corpus as supporting or contradicting claim

Classification and Comparison of Malignancy Detection of Cervical Cells   Nov 2017
- Classified microscopic images of uterine cervix based on nucleus and textural features
- Trained SVM model on GLCM extracted textural features and increased performance of benchmark model by 13%
- Published in International Journal of Medical Engineering and Information by Inderscience

Project Manas, Self-driving Car   Oct 2015 - Oct 2017
- Developed models and ROS packages for lane and sign detection adaptable to Indian roads using Transfer Learning
- Qualified to top 13 teams for the Mahindra's Rise Prize challenge and won the Lescoe Cup at IGVC held in Michigan