FEI TAO

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OBJECTIVES

Seeking full-time entry-level opportunities in the fields of Software Engineering and Data Engineering.

EDUCATION

Rutgers University, Piscataway, NJ   Sept. 2016 – May 2018
M. S. in Computer Engineering, GPA 3.6/4.0

Xiamen University, China   Sept. 2012 – June 2016
B. S. in Electrical Engineering, GPA 84/100
- University Academic Excellence Scholarship
- Huang Jinding Academic Excellent Scholarship

WORK EXPERIENCE

Research Assistant, Rutgers University, Piscataway, NJ   Sept. 2017 – present
- Participated in an NIH project to build a smart trauma resuscitation decision support system.
- Performed machine learning approaches (clustering) to partition patients into cohorts of similar conditions.
- Designed weight learning algorithm on case-based feedbacks using gradient descent approaches then conducted statistical significance test to uncover the association between treatment patterns and patient cohorts.
- Paper submitted to the analytic track of International Conference of Health Informatics 2018.

Research & Development Intern, Aike Co. Ltd., Hebei, China   June 2015 – Sept. 2015
- Developed a detection system which checks the imperfection of electronic components.

PROJECTS

(Python, Java, MapReduce) A review-based Recommendation System   Feb. 2017 – present
- Presented a book recommendation system with an Amazon 10G dataset by implementing rating-based collaborative filtering algorithm and content-based approach.
- Mined reviews with sentiment analysis and frequent words weighted by TF-IDF to build product and user profiles.
- Employed MapReduce to handle large-scale matrix multiplication and addition.

(Python) Modeling Human Affective Behavior with Deep Learning   Oct. 2017 – Dec. 2017
- Applied CNN, RNN (GRU) and DCGAN models to accomplish speech-driven facial animation.
- Generated landmarks of the speaker from audio and video features by applying CNN and GRU.
- Synthesized faces conditioned on landmarks by applying DCGAN.
- Improved outcomes by personalizing facial expression instead of projecting on 3D models based on CVPRW paper.

(C++) Digits Classification and Face Detection   Apr. 2017 – May 2017
- Trained Naïve Bayes Classifier, Perceptron and MIRA to detect digit and face images.
- Enhanced feature extraction by detecting circles in a digit image using a circular linked list.

(C++) Fast Trajectory Replanning for AI Computer Games   Feb. 2017 – Mar. 2017
- Extended A* algorithm to incremental versions, forward and backward Adaptive A* by updating the heuristics between searches to find solutions for a randomly generated maze.
- Designed the data structure binary heap by in C++ to keep searching optimal node.

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, JavaScript, MATLAB
Database Systems: MySQL, MongoDB
Frameworks: Sci-kit learn, SciPy, NLTK, Tensorflow, Numpy, Pandas, OpenCV, BeautifulSoup
Systems & Tools: Linux, Docker, Git, Hadoop, AWS
Certifications: Deep Learning Specialization (deeplearning.ai) by Andrew Ng in Coursera.

RELEVANT COURSES

- Data Structure and Algorithms
- Linear Algebra and Applications
- Stochastic Signals(Probability)
- Artificial Intelligence
- Massive Data Mining
- Pattern Recognition