Albert James

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TECHNICAL PROFICIENCY

Languages: Python,C#, C++,C,Java   **Technologies**: MongoDB,Redis,MsSQL,RabbitMQ,LATEX

EDUCATION

University of Massachusetts Amherst   Amherst, MA
M.S in Computer Science   *Aug 2017 - May 2019*
GPA : 4.0 (Relevant Courses:*Advanced Algorithms, Machine Learning*
                    Advanced Natural Language Processing)

Birla Institute of Technology and Science,Pilani   Hyderabad, India
Bachelor of Engineering in Electronics and Communication Engineering   *Aug 2012 - Jul 2016*

PROJECTS

Machine Comprehension Using Deep Learning : *Aug 2017-Nov 2017*

- Implemented Machine learning models to comprehend a passage and answer questions based on it. The machine learning models were trained on `SQuAD(Stanford Question Answering Dataset)`, a freely available dataset for machine comprehension.

- LSTM and Bi-LSTM Generative models, along with LSTM,Bi-LSTM and Bi-LSTM with attention models with answer pointer were trained on the dataset. The models were implemented in `Tensorflow` and trained with the help of Google Cloud.

Predicting Subject Verb Agreement Using LSTM:*Jan 2018-Feb 2018*

- Used LSTM encoding layer followed by logistic regression to predict plurality of the verb following a sequence of words. Compared performance of the model in cases where the final verb was given and where the final verb was not given. This model is based on the work by Linzen et al 2016.

Prediction Of Mean Particle Size in Batch Reactor: *Jan 2016 - Apr 2016*

- Predicted the Mean Particle size in a batch reactor by using Multi layer Neural Network,the models were trained using various algorithms and their performance was noted. Levenberg Marquardt and Bayesian Regularization Algorithms were used to train the models and performance was compared.

- The model was created using Matlab and Achieved comparable performance to widely used chemical and pharmaceutical Simulation Software(ASPEN).

Optimal Character Selection In DOTA: *Feb 2015-Apr 2015*

- DOTA(Defense of the Ancients) is widely popular multi-player game. The character selection for professional games were collected by extracting the information from the web pages of *Dotabuff.com.*

- Utilized Apriori and FP-tree algorithms to predict the optimal character selection. The predictions were consistent with the trend at the time.

Solving and Visualizing Puzzles in AI *Feb 2018-Current*

- Personal project, creating visualization of puzzles in AI, as covered in the course and using `tkinter(a python gui package)` to visualize the solution and process of finding the solution. Puzzles include Knight puzzle, Traveling salesman, sudoku etc.

EXPERIENCE

BookMyShow
BackEnd Software Developer

Mumbai, India
Jul 2016 - Jul 2017

- Created API to store and retrieve user profiles and transaction information of over 30 million users using MongoDB as the database and Redis as the cache.
- Successfully resolved loss of users due to high page load time by revising the database schema. Wrote C# based migration scripts to change existing data into the new storage schema.
- Developed a porting application in C# to migrate data from SQL servers to MongoDB and Redis. Successfully used the application to migrate the old transactions to the respective users without loss of data or semantics
- Solved the sluggishness of the data transfer and resulting system crashes under traffic surge by using RabbitMQ with a C# wrapper. The revised system was capable of transferring 60,000 messages in parallel.

Blue Jeans Networks
Automation Intern

Bangalore, India
Jul 2015-Dec 2015

- Automated over 100 test cases for Middleware testing of the cloud based video conferencing software system.
- Wrote test automation scripts in JAVA which became part of the test suite used in 3rd and 4th quarter official releases of the software system

Central Leather Research Institute
Software Development Intern

Chennai, India
Summer 2014

- Developed an application in C++ and Matlab to classify the surface leather defects in leather. The surface leather defects were determined by K-means clustering and were later separated according to the grade of the defect by utilizing images of the leather.