RANRAN CAO

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PROJECTS

Movie Recommender System Oct.2017-Nov.2017

- Developed a movie recommender system to users using Netflix dataset and the **Hadoop** framework.
- Calculated movie rating matrix from Netflix dataset using collaborative filtering algorithm.
- Implemented **MapReduce** Java code for co-occurrence matrix generation and multiplication of co-occurrence matrix and movie rating matrix to obtain recommendation list.

Event-Reporter: a LBS based Android App project Aug.2017-Oct.2017

- Developed an **Android** App for users to post events and search nearby events based on key words.
- Integrated **Google Map API** to display the nearby hot events and navigate to the events.
- Used Google **Firebase** to store and manage UGC including title, images, description, comments, etc.
- Used in-app advertising (Google **AdMob**) to show Google advertisers and keep engaged.

Event Search and Recommendation Engine Jul.2017-Aug.2017

- Designed an interactive web page utilizing **AJAX** technology (**HTML**, **CSS** and **JavaScript**).
- Created **Java servlets** with **RESTful APIs** to handle **HTTP** requests and responses.
- Built relational and NoSQL databases (**MySQL, MongoDB**) to fetch event data from TicketMaster API.
- Designed algorithms (e.g., content-based recommendation) to implement event recommendation.
- Deployed server side to **Amazon EC2** to handle 150 QPS tested by **Apache JMeter**.

WORK EXPERIENCE

Deep Learning Research Assistant July.2017-Present

University of California, Riverside

***Deep Learning** series projects(Techniques involve **Python, NumPy, TensorFlow**):*

- Implemented **the neural style transfer algorithm** to generate novel artistic images.
- Constructed the building blocks of **ResNets** and combined them to develop and train a neural network for **image classification(**Residual Networks).
- Developed **object detection** on a car detection dataset using **YOLO model** and tackled bounding boxes problem(Autonomous driving **– Car detection**).
- Implemented the triplet loss function and used a pre-trained model to map face images into 128-dimensional encodings.
- Used these encodings to perform **face verification** and **face recognition.**

EDUCATION

UNIVERSITY OF CALIFORNIA, RIVERSIDE Sep.2015 – Jun.2017

Master of Science, Electrical Engineering

Coursework: Artificial Intelligence, Data Structures and algorithms, Embedded System Design.

BEIJING UNION UNIVERSITY Sep.2011 – Jun.2015

Bachelor of Science, Automation (concentration in Internet of Things)

Coursework: Data Structures, Programming Language(Java), Database Design & Development, Mobile Development(Android).

TECHNICAL SKILLS

Languages: Java; C++; HTML/CSS/JavaScript/Ajex; SQL; Matlab.
Tools: Git/Github; Apache Tomcat; MongoDB; SQLite, MySQL, MongoDB; MapReduce; AWS EC2; ELK; JUnit, Apache JMeter; ElasticSearch; Admob, Firebas; NumPy.