Chaitanya Bapat (Chai)

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Education

Georgia Institute of Technology GPA: **3.63/4** Atlanta, GA, USA
Masters in Computer Science, Machine Learning *Aug. 2017 – May 2019*

University of Mumbai CGPA: **8.41/10** Mumbai, MH, India
Bachelor of Engineering in Computers *Aug. 2013 – May 2017*

Experience

Amazon Web Services Palo Alto, CA, USA
Software Development Engineer *July 2019 – Present*

- Elected as a Committer to Apache MXNet, an open-source deep learning framework [***Announcement***]
- Built MXNet CI-bot that lead to $240k annual savings for the group [***Design***][***Demo***]
- Enabled distributed model training with Apache MXNet and Horovod on AWS Sagemaker that resulted a previous 26 hour training to conclude in 8 hours. [***AWS ML Blog 1***] [***AWS ML Blog 2***]
- Developed a 2D Transpose kernel with 47% speedup by optimizing L1 cache utilization and vectorized operations

Deep Learning Intern *Sept 2018 – Dec 2018*

- Designed and implemented new user-critical APIs - Debug operators, Constant initializer for NDArray
- Developed a random integer sampling operator that gave 17x speed-up over the equivalent Numpy library method

Verizon Connect Atlanta, GA, USA
Software Engineer Intern *May 2018 – Aug 2018*

- Built an ensemble model for Predictive Maintenance of automobiles based on Diagnostic Test Codes (DTC)
- LSTM-based model ingested time-series data and performed well with 79.2% precision
- Experimented on Device-to-Blockchain, novel concept of storing vehicle data directly onto the blockchain without the involvement of any other third-party with performance testing on Ethereum and HyperLedger Sawtooth

Georgia Insitute of Technology Atlanta, GA, USA
Graduate Research Assistant *Aug 2017 – May 2018*

- Built a decentralized app (dApp) for academic credential management using Solidity on Ethereum blockchain
- Researched on the best practices for Massive Online Open Courses (Udacity and Coursera) and Vertically Integrated Programs
- Analyzed and evaluated the performance of Online platforms vs On-Campus for CS1201 course

Projects

Rapport – Interactive, Patient-centered Radiology Reports | ***Demo*** Aug 2017 – Dec 2017

- Annotated reports with Lay Language definitions using Natural Language Processing (Apache cTAKES)
- Visualizing 3D human body models using BioDigital API for explaining complex anatomical concepts

Smart Locks Re-engineered: Securing IoT devices using Cryptography and Steganography | ***arXiv*** Aug 2016 – May 2017

- Designed the Smart Lock using the Raspberry Pi 3 Model B, capable of ensuring secure locking system
- Leveraged BLE protocol to mitigate the vulnerabilities like Man-in-the-Middle attack

Skin Image Recognition using RGB, HSV, YCbCr models | ***arXiv*** Jan 2016 – Dec 2016

- Designed an algorithm for identifying skin pixel from non-skin pixel using the RGB, HSV, YCbCr models
- Applied Linear Regression and Bayesian Classifiers for carrying out Segmentation of Skin Images

Technical Skills

Languages: Python, C/C++, Java, JavaScript, HTML/CSS, R
Databases: SQL (Postgres, MySQL), MongoDB, DynamoDB, Cassandra
Frameworks: Apache MXNet, Tensorflow, PyTorch, Apache Spark, Apache Hadoop
Developer Tools: Git, Docker, Jenkins
Libraries: pandas, NumPy, Matplotlib, D3.js, Tableau