Chaitanya Bapat (Chai)

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: [chaibapchya.github.io](https://chaibapchya.github.io/) *|* € [chaibapat](https://twitter.com/chaibapat) *|* ® [/in/chaibapchya](https://www.linkedin.com/in/chaibapchya/) *|* Š [ChaiBapchya](https://github.com/ChaiBapchya)

Looking for **full-time** opportunity with **Skilled Worker visa** sponsorship

# 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***]](https://github.com/apache/incubator-mxnet/pull/19512)
* Built MXNet CI-bot that lead to $240k annual savings for the group [[***Design***](https://cwiki.apache.org/confluence/display/MXNET/MXNet%2BCI%2BBot)][[***Demo***]](https://youtu.be/gfOGwZId8aU)
* Enabled distributed model training with Apache MXNet and Horovod on AWS Sagemaker that reduced 26 hour end-to-end training time to 8 hours (*≈*70%). [[***AWS ML Blog 1***]](https://aws.amazon.com/blogs/machine-learning/reducing-training-time-with-apache-mxnet-and-horovod-on-amazon-sagemaker/) [[***AWS ML Blog 2***]](https://aws.amazon.com/blogs/machine-learning/horovod-mxnet-distributed-training/)
* 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

# Education

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| --- | --- | --- |
| **Georgia Institute of Technology**  *Masters in Computer Science, Machine Learning* | GPA: **3.63/4** | Atlanta, GA, USA  *Aug. 2017 – May 2019* |
| **University of Mumbai**  *Bachelor of Engineering in Computers* | CGPA: **8.41/10** | Mumbai, MH, India  *Aug. 2013 – May 2017* |

Projects

**Rapport – Interactive, Patient-centered Radiology Reports** *|* [: ***Demo***](https://youtu.be/r9gTR6IzEqM)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***](https://arxiv.org/abs/1901.06381)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***](https://arxiv.org/abs/1708.02694)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