

# CHAITANYA BAPAT (CHAI)

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[chaibapchya.github.io](https://github.com/chaibapchya) | [chaibapat](https://twitter.com/chaibapat) | [/in/chaibapchya](https://www.linkedin.com/in/chaibapchya) | [ChaiBapchya](https://www.youtube.com/channel/UCv3v3v3v3v3v3v3v3v3v3v3)

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](#)]
- 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 reduced 26 hour end-to-end training time to 8 hours ( $\approx 70\%$ ). [[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 Institute 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

### 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

## 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