Anjali Chourdia

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Academic Details

Sept'17 - May'19	Bachelor of Science at **New York University** with **Magna Cum Laude** Major in **Computer Science and Engineering**, Minor in **Mathematics**— Gpa: 3.79/4 - Dean's list Fall'17-Spring'19
July'15 - May'17	Matriculated from **Indian Institute of Technology, Delhi** in Biochemical Engineering and Biotechnology

Work Experience and Projects

Sensitive Data Discovery, Meta Platforms Inc., London **Jan 23 - Present**
Software Engineer

- Build systems to detect potentially sensitive data stored across the company.

PyTorch, Meta Platforms Inc., New York, NY **Aug 19 - Dec 22**
Software Engineer

- One of the 15 core maintainers of PyTorch out of an organization of 200 and also one of the top 30 global contributors to PyTorch out of hundreds of active OSS contributors and shipped over 17k lines of code.
- Lead the effort to add Complex Number support (From scratch) including defining the convention for complex differentiation to PyTorch which is being used in many popular audio libraries (like TorchAudio, ESPNet, FastMRI) and official implementations of research publications.
- As a result of the complex number work in PyTorch and it's usage in TorchAudio, we published TorchAudio: Building Blocks for Audio and Speech Processing at IEEE ICASSP 2022:
- Gave a tech talk at PyTorch Annual Developer Conference (virtual due to the pandemic) which was attended by over 66k people. This tech talk also influenced Googles JAX library to change their autograd convention for Complex Numbers.
- Added python registration for PyTorch operators among many other composable API functionalities for PyTorch 2.0 compile mode release.

Feed Ads Quality Team, Facebook Inc., Menlo Park, CA **Summer'18**
Software Engineering Intern

- Working to improve the post-click experience for news feed ads, which receives roughly 300 million clicks everyday.
- Introduced new offline data pipelines for machine learning models that lowered the system workload and query latency time by 60%.
- Migrated the currently used machine learning models to a new architecture, which increased the business top level metrics by 3% and reduced the model's memory usage by 50%.
- Served the new models in Facebook Ads Ranking Infra system and introduced a new bid in the Facebook Ads Auction system.
- Worked to improve the bad landing page feed ads experience.

The Go Game, San Francisco, CA **Summer'17**
Deep Learning Intern

- Worked on a deep learning framework to count the number of human faces in a given image, which was used to manage and verify the working of remote offices of the company.
- Worked on a deep learning model to accommodate for different human poses and used it for image segmentation.
- Developed an image search system using image captioning models and an inverted image index to give all the pictures corresponding to a word query.

Ham Sandwich Cut Prof. Greg Aloupis
NYU Advanced Algorithms **Spring'19**

- Implemented Steiger's algorithm to obtain a Ham Sandwich Cut in 2D, along with a visualization to demonstrate the algorithm for any point set in real time.

Aspect-level Sentiment Polarity Classification Using LSTM Prof. Adam Meyers
NYU Natural Language Processing **Fall'18**

- Implemented an attention-based LSTM for two-way and three-way classification of restaurant reviews as positive, negative or neutral given an input aspect(eg. taste, service, ambience etc.).

Quadratic Unconstrained Optimization problems Prof. Margaret H. Wright
NYU Numerical Optimization **Fall'18**

- Proposed a method to solve quadratic unconstrained optimization problems using eigenvalues and eigenvectors. The method converged in linear iterations for some quadratics when tested on a set of randomly generated quadratics, including on the benchmark matrix identified by Schnabel and Eskow with a large drop in the norm of the gradient value (3 to 8 powers of 10) in the last iteration.

Interactive Digital Video Montage Prof. Subhashis Banerjee
IIT Delhi Independent Project **Fall'16**

- Worked on a computer assisted framework for combining parts of a set of photographs into a single composite picture using techniques such as: Graph-cut optimization and gradient domain fusion and extended that functionality to videos.

Relevant Courses and Technical Skills

Numerical Optimization, Natural Language Processing, Artificial Intelligence, Algorithms, Advanced Algorithms, Linear Algebra, Differential Equations, Computer Architecture, Computer Networking, Discrete Mathematics, Operating System, Machine Learning†, Computer Vision†, CNNs for Visual Recognition† — † MOOCS

- **Programming Languages and Frameworks:** C++, Python, Java, C, PyTorch, Tensorflow, Keras, MySQL