Anand Saha

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My mission is to bring cutting edge AI research into practice

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Highlights

- 14 years of strong industry experience in building enterprise products and services
- 3 years of experience in developing and productionising machine learning models
- Hands on with deep learning and computer vision
- Hands on with effective transfer learning and optimization techniques
- Good understanding of algorithms, data structures, distributed systems
- Experience as Scrum Master

Technologies

Languages: Proficient in Python. Extensively used C/C++ before.
Frameworks: Tensorflow, Keras, PyTorch, V-REP
Libraries: NumPy, Pandas, Matplotlib, Scikit-Learn, OpenCV
Others: Multithreading, REST, AWS, OpenStack, Object Storages, SQL, Virtualization, Distributed Systems, Storage Systems, Debugging and Performance Analysis

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Experience

Cogent Labs (1 year 11 months …) (current)

Machine Learning Engineering Manager   Aug'19-Current

I lead the ML engineering team of 7 engineers and a data team of 4 labelers, maintaining our deep learning models and iteratively improving their performance. I provide technical leadership to my team and serve as architect of our ML/CV based projects. I work closely with product managers to map market requirements to engineering roadmap and with researchers to productionize their prototypes. I am involved with design discussions, code review, best practices, data security, project planning, lead POCs, purchases for ML needs etc. I led our last wave of hiring ending with two ML talents joining our team.

Sr. Machine Learning Engineer   Sep'18-Jul'19

I worked on computer vision tasks like OCR and text detection algorithms, data formats for training, data management, edge solutions and security etc.

CAREER BREAK (10 months)

AI Research & Engineering   Apr'17 - Jan-'18

Quit my job in March'17 to focus full time into AI and deep learning with the intention of bringing research in this area into practice. Towards that, I have been focusing on research paper study, implementation of research papers, effective ways to train models, setting up hardware for deep learning training, solving use cases using computer vision, reinforcement

learning and nlp, taking online courses, sharing technical insights via my blog, contributing to open source etc. (http://teleported.in/)

Lily.AI

Apr'18-Aug'18

Data Scientist (Consultant)

> Applying deep learning and computer vision techniques to apparel feature extraction, discovery and recommendation.

Packt

Jan'18-Apr'18

Author/Course developer - Deep Learning with PyTorch

> I authored a course on "Deep Learning with PyTorch" with Packt Publication.
> http://bit.ly/dl-pytorch-course

FLYTBASE

AI Engineer (Consultant)   Jun'17 - Sep'17

> Created an image processing pipeline to extract information from high resolution aerial images, catering to uses cases like object detection and counting, in domains like wildlife conservation and inventory management. Made use of libraries like Tensorflow and various deep learning models. Helped them launch their AI platform (http://bit.ly/oryx-detection).
>
> Also worked on an algorithm to detect changes between two images using traditional vision techniques.

VERITAS TECHNOLOGIES LLC (Cont. after SYMANTEC/VERITAS split) (1 year 6 months)

Principal Software Engineer   Oct'15 - Mar'17

> Worked on the cloud stack of NetBackup for data backups to cloud platforms like AWS and OpenStack. Developed tools to certify new cloud providers for operability with NetBackup. Served as tech lead of the team to coordinate feature engineering activities with product owner, architects and leadership.

SYMANTEC (3 years 7 months)

Principal Software Engineer   Mar'12 - Sep'15

> Tech Lead, designed and implemented various enterprise features of NetBackup , including SharePoint protection, virtualized assets protection etc. I have mostly worked with C++ and the system stack (OS, Networking, Storage, CLoud, Databases).

TATA COMMUNICATIONS (4 years 6 months)

Senior Software Engineer   Sep'07 - Feb'12

> Developer and maintainer of TATA Communications's machine learning based system to predict voice traffic patterns using linear regression. The system generates optimised dial plans for the upcoming hour, having direct impact on revenue.

GAVS TECHNOLOGIES (4 years 4 months)

Software Engineer   May'03 - Aug'07

> Implemented various bespoke projects spanning technologies like C/C++, .NET, WiMax and Symbian OS. In addition to software development, wrote tech proposals, presented solutions to customers, managed teams.

Course Projects (https://github.com/anandsaha)

- Predicting Boston housing price
- Finding donors for charity ML
- Clustering customers for identification
- Training a cab to drive itself
- CNN project to identify dog breed

- Solving Sudoku with AI
- Building an adversarial search agent
- Create domain independent planner
- Using HMMs to recognise ASL
- RNN time series prediction
- CV: Facial keypoint detection

Relevant Certifications

- Fast.ai deep learning course via international fellowship   Oct'17 - Dec'17
    Computer Vision, Language Models, Transfer Learning and Optimization techniques
    Implemented the paper *Fixing Weight Decay Regularization in Adam* in the fastai library in PyTorch. (http://bit.ly/fastai-adamw)
    Had hands-on exposure to effective transfer learning, optimization techniques, use cases in computer vision and nlp.
- Udacity's Machine Learning Nanodegree   Apr'17 - Jul'17
    Supervised, Unsupervised, Reinforcement, Deep Learning, Tools and Techniques
    Ideated, designed and implemented a reinforcement learning based system to train a robotic arm to pick and place items using Q-learning. This was done in the V-REP simulation environment. (http://bit.ly/rl-capstone)
- Udacity's AI Nanodegree (Computer Vision concentration)   Apr'17 - Dec'17
    Game Playing, Search, Simulated Annealing, Constraint Satisfaction, Logic and Reasoning, Planning, Bayes Nets, Hidden Markov Models, Deep Learning
- Coursera Cloud Computing Specialization (part 1 to 4)   2016
    Concepts, Applications, Networking

Education

National Institute of Technology, Tiruchirappalli   1999 - 2003
    BE, Instrumentation and Control Engineering

Indian Institute of Sciences (IISc), Bangalore   Summer of 2002
    I did my 3rd year summer project here studying scheduling in Real Time Operating Systems.

Indian Institute of Technology (IIT), Bombay   Summer of 2001
    I did my 2nd year summer project here, worked on FPGA implementation of a Network Interface Controller for Network Printer.