Amit Panghal

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EDUCATION

NEW YORK UNIVERSITY
MS in Computer Science
Courant Institute of Mathematical Sciences
Expected May 2019 | NYC, NY
GPA: 3.7/4.0

IIT BOMBAY
B.Tech in Computer Science
Honours with Thesis
2010-2014 | Mumbai, India
Narotam Sexaria Scholarship
IChO Medallist

SKILLS

PROGRAMMING
Over 10000:
C++ • Java • Android
Over 5000 lines:
Python • Go • Lisp
Familiar:
MySQL • Javascript • Solidity • Michelson

FRAMEWORKS AND TOOLS
Django • React+Redux • R • Hadoop •
Spark • Pandas • Mahout •
RapidMiner-Radoop • AWS:S3, EC2 •
Docker • d4lj

LINKS

Github:// **panghalamit**
LinkedIn:// **panghalamit**
Webiste:// **crypp.tech**

COURSEWORK

GRADUATE
Distributed Systems
Intro to Cryptography
Applied Cryptography and Network Security
Cryptocurrencies and Decentralized Ledgers
Abstract Intepretation Big Data and ML Systems
Big Data Science

UNDERGRADUATE
Foundations of Machine Learning
Performance Analysis of Systems and Networks
Database and Information Systems
Artificial Intelligence + Practicum

EXPERIENCE

TOCQUEVILLE GROUP (TQ) | Blockchain Engineer Intern
Spring 2019 | NYC, NY

Protocol Research & Development : Working on scaling solutions for Tezos Blockchain Platform. Implementing avalanche consensus algorithm and porting it to current implementation written in Ocaml.

SAMSUNG RESEARCH INDIA | Senior Software engineer
Communication Research Team |July 2014 – July 2017 | Bangalore, India

Transmission Time Predictor : Smart service for predicting upload/download times of media files using Machine Learning. Lead research and development of prototype solution including data collection, feature selection, modelling and deployment. Won 2nd Place at Samsung wide C-LAB competition. Patent pending.

Power Management : Service to monitor, synchronize background activity of infrequently used applications in Android. Developed android application/widget for demo and testing. Solution was commercialized in Samsung mobile devices.

Data Traffic Management : Made android framework layer changes to piggyback foreground data traffic with asynchronous background transmissions to optimize total radio active time.

Data Analytics : Carried out controlled experiments to collect per-component power data in Smartphones. Modelled data in R using quadratic programming and obtained new power-coefficients for all cpu frequencies which resulted in better cpu power estimation on 8 core Samsung Exynos CPU.

Research : Presented research on Transmission Time Estimation at IEEE WCNC. Initiated and lead literature review sessions within team.

RISE AB | Student Reseacher
Network Embedded Systems Group|Summer 2013 | Stockholm, Sweden

Data Transfer Protocol : Prototyped, developed and deployed a decentralized data transfer protocol for low power sensor nodes using C on Contiki OS. Sensor nodes with solution were deployed on Large structures to collect and transfer vibration data for structural health monitoring.

PROJECTS

AvaStore Distributed data store written in go that uses avalanche family of consensus algorithms to order transactions. Tested for correctness using porcupine linearizability checker.

Books2Rec Open source Hybrid recommender system using content features from metadata and latent features from preference matrix to recommend books to goodreads.com users.

Road Traffic Forecasting Time Series Forecasting of average speeds of NYC MTA buses. Used Box-jenkins methodology for model selection. Preprocessing, Modelling and Validation on large scale distributed system (Spark).

Multi Factor Authentication System Developed android application, authentication backend using django and webapp for testing. Used sms powered channel using twilio apis for challenge response based authentication protocol.

Data Center Management Developed a simulator in c++ to benchmark Virtual Machine migration algorithms. Optimal algorithm uses Markov Decsion Process with input as workload patterns, SLA violation costs, power cost etc. and returns optimal policy to maximize data center profits.