TARUN LOHANI

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EDUCATION

Stony Brook University • New York, U.S.A. *Aug 2016 – Dec 2017*
Master of Science, Computer Science *CGPA - 3.55/4.0*

Courses: Analysis of Algorithms, Operating Systems, Artificial Intelligence, Probability and Statistics for Data Scientists, Visualization, Principles of Database Systems, Computational Biology, Wireless and Mobile Networks, Theory of Computation, Principles of Programming Languages.

National Institute of Technology, Jamshedpur • Jharkhand, India *Aug 2008 – May 2012*
Bachelor of Technology, Electronics and Communications *CGPA - 8.53/10.0*

Courses: Programming and Data Structures, Computer Communication and Networking, Computer Organization and Microprocessors, Embedded Systems and Control, Software Engineering.

SKILLS

Languages	GoLang, Java, JavaScript, Python.
Web Technologies	NodeJS, HTML5, CSS, Pyhton Flask, RESTful API, SOAP, D3.
Databases	Postgres, MySQL, MongoDB, SQLite, ZooKeeper.
Tools	GoLand, VSCode, Android Studio, Eclipse, IntelliJ, Git, Swagger.
Google Cloud	App/Compute Engine, Firestore/Datastore, Pub-Sub, Stackdriver, Storage, Cloud functions, BigQuery, Cloud Scheduler, Dataflow

WORK EXPERIENCE

PayPal Inc. *Feb 2018 – Present*
Software Engineer 2 *San Jose, CA*

- Teaserv - Worked on PayPal's next generation infrastructure platform. Developed CLI and gRPC/REST micro-services, to provide Infrastructure as a Service leveraging GCP and PayPal's internal container platform "Genesis". This effort brought down the consumption of GCP cores by 70%.
- Release Checklist - Developed release recommendation engine to validate candidate manifests and allow or block them based on their risk score. Integrated with multiple downstream systems to get the result and expose them with gRPC as well as REST endpoints for front-end integration. On-boarded PayPal subsidiaries - Venmo, Braintree and Simility on this system.
- URP - Working on Geo-China module of the project to provide capabilities of keeping GoPay, a subsidiary company in China, in sync with North America releases.

Google Inc. *May 2017 – Aug 2017*
Software Engineering Intern *Mountain View, CA*

- ChromeOS Team - Worked for "Toolkit Improvements in Large Screen Devices". Implemented new features in Android application framework and ARC++ to support mouse, hover and drag gestures.

Samsung Research India *Jul 2014 – Aug 2016*
Senior Software Engineer *Bangalore, India*

- Platform Team - Implemented *Universal Switch*, *Galaxy Talk back* and *Direction Unlock*, some salient accessibility features for physically challenged people in Galaxy devices, which required both application and framework layer changes. Direction unlock was selected as *Most innovative accessibility feature* of the year.
- S-Health Sports – Implemented major features such as Exercise intensity and calorie profiling charts, *Workout Replay and sharing* feature using Google maps and *Air View* support in S-Health application (sports module).
- Strength Training - Developed a Tizen web app for Galaxy Gear S2 watch which detects repetition counts for exercises like "Push-ups", "Sit-ups", "Chest-fly" and "Squats", employing machine learning techniques.
- My Gear My Style - Developed a highly customizable watch face comprised of Tizen web app for Gear S2 and its counterpart Mobile app. The companion app won 2nd prize in Samsung conducted *Tizen app challenge*.

Kony Labs *Sep 2012 – Jul 2014*

Software Engineer *Hyderabad, India*

- Medical Mutual of Ohio – Developed ID card module of the application, implementing functionality to manage user profile, view ID card and other descriptions like insurance period, claims and offers.
- OTIS Application – As owner of Job management module, implemented job status change, displaying jobs on map, search/sort/forward a job, order parts and sync to enterprise DB consuming SOAP services.

ACADEMIC PROJECTS

Conference Management and Ticketing System *Feb 2017 – May 2017*

- Developed and documented APIs for scheduling meeting and sending notifications to the invitees using NodeJS and Swagger. This web based application will be used in the upcoming conferenes at CEWIT, Stony Brook.

Crime Data Visualization and Analytics *Apr 2017 – May 2017*

- Developed interactive web visualization of Crime in US using Javascript, d3.js and other libraries. Processed the data using standard data reduction/sampling and analyzed it using PCA and MDS correlation in Python. Plotted data on US Map comparing crime rates using Radar chart and Parallel coordinates. • GitHub Link Youtube Link : https://youtu.be/wKYCvjxeDAU

Per process system call Vector Table *Nov 2016 – Dec 2016*

- Implemented a per-process system call vector support for Linux kernel. An existing or a custom system call can be registered to a vector table and process can use any one of these vectors. New version of clone system call was added so that a child process has option to choose its vector while cloning. • GitHub Link

TRFS Stack-able File-system *Oct 2016 - Nov 2016*

- Developed a stack-able file-system for Linux kernel which has capability to intercept and log all the file operations and replay them to validate the trace. Modifications were done on top of Wrapfs file-system. • GitHub Link

Xmergesort System Call *Sep 2016 - Oct 2016*

- Developed a system call for Linux which takes two sorted input text files and merges them to generate a single sorted output file. • GitHub Link

Alternative memory layouts for suffix array *Sep 2016 – Dec 2016*

- Implemented B-Tree and Eytzinger memory layouts for vanilla suffix array to improve performance in terms of time and memory for pattern searches in huge texts. • GitHub Link

Infrastructure side positioning of cellular band devices *Sep 2016 – Dec 2016*

- Developed a model to localize cellular devices for a network operator using supervised and unsupervised machine learning techniques based on signal measurements of different mobile towers. • GitHub Link

FaceMashPlus *Oct 2016 – Dec 2016*

- Designed a relational database system to support the operations of a social networking as well as e-commerce website. Designed basic user interface of the website using JSF. • GitHub Link