# Arjun Naik *October 29, 1987*

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## Summary

*A organised, meticulous, and resourceful software engineering with a focus on building distributed systems.*

It has been 10 years since I picked up a book on C programming. Since then I have been led deeper into the world of software development. My discovery of Python was the second biggest turning point. This sparked my interest in Web applications and subsequently Distributed Systems.

After obtaining a Bachelor's degree in Computer Science and Engineering I spent 2 years working at a consultancy. Here I got my first experience of participating in large projects and the responsibilities that come along with it. After that I moved to a startup where I built web applications and developed an interest in Android development. After working for 2 years in the industry I decided to continue my education in Germany. Studying at TU Dresden in the Systems Engineering chair has given me a unique opportunity to participate is several diverse research projects.

Once I graduate I hope to work in an environment which encourages independent decision making and offers interesting challenges. Since I am a big proponent of open-source, I also wish that my work both utilises and contributes back to the community.

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## Experience

### Netbramha Studios
BANGALORE, INDIA

**Web Developer**
*Oct 2010 - May 2011*

Netbramha Studios is a consultancy which develops well designed and content intensive websites for their clients. Hired right out of college to handle the technical aspects of maintaining these websites as well as minor front-end development. Some projects were built using third-party as well as in-house frameworks. For the front-end development used jQuery and Dojo and also did some basic layout and styling with HTML+CSS. As my responsibilities grew was handed the task of developing a complete web-based front end for one of India's largest pizza delivery chains.

### Locus Labs
BANGALORE, INDIA

**Web and Mobile Developer**
*Jun 2011 - August 2012*

Locus Labs was at that time a unseeded startup which developed apps for the Singapore market. The main prodcut Notikum found offers and bargains for shoppers based on their profile. This involved collecting data from hundreds of websites. I was in the team which scraped the data and indexed it with Solr. I did this while concurrently developing and maintaining the website for this application. The surge in mobile apps necessitated that an Android app be development which I initially did myself and later coordinated with new hires.

After the startup pivoted was given further responsibilities. Was put in charge of the development of the new product Notiphi. Location based advertising was the primary goal of this service. Designed and implemented the initial prototype. Also developed the tools needed for the deployment and monitoring of the cloud-based infrastructure. Using my previous Android experience developed the Android SDK which could be used by third-party developers to integrate this service into their apps.

### DMFS
DRESDEN, GERMANY

**Application Developer**
*Jan 2013 - March 2014*

DMFS develops data sync applications for the Android platform. I was responsible for the development of the Tasks app which uses the CalDav protocol to sync calendar data. This app was subsequently open-sourced and available on Github.Was also part of the team which developed an Android based Calendar Store.

But my primary role was as a Django developer. Developed a web service for the bulk-retail of mobile apps. The service used OpenSSL cryptography to sign and verify the source of the apps. Only apps with a valid key issued from the website could be activated. Also developed the Android SDK which integrates with third-party apps to provide this functionality.

### INQUENCE GmbH
DRESDEN, GERMANY

**Systems Developer**
*Mar 2014 - Jul 2014*

INQUENCE develops a complete hardware and software solution for office for the the storage and search of the all types of physical and electronic documents. Wwas responsible for the maintenance of the web frontend for this solution, as well as the addition of new features. The software solution consisted of several services which were responsible for converting, indexing and storing the data. Developed a monitoring mechanism using Monit which kept track for all the individual hardware units and monitored for performance changes after software updates.

TU Dresden                                                      Dresden, Germany
    **Wissenschaftliche Hilfskraft**                                *Mar 2013 - Present*
        As a part of the SREX(Secure Remote Execution) project developed a translator for C programs. The
        C programs were translated into a subset of C which can be encoded with redundant operations to
        ensure correct execution even in the event of bit-flips or other random transient errors.
        More recently I have been working with distributed coordination services like ZooKeeper and Consul.
        I have been evaluating the efficacy and characteristics of the respective protocols(ZAB and Raft). Also
        included, is the implementation of new features in Kazoo, a Python client library for Zookeeper.

        *Please consult my LinkedIn Profile for references.*

## Education

BM Sreenivasaiah College of Engineering, Vivesvararya Technological University  Bangalore, India
    **Bachelor of Computer Science and Engineering**                    *2006 – 2010*
        Major was in Computer Science with a focus on Computer Architecture. Was also one of editors of
        the departmental newsletter and also a regular contributor. For my final year project developed a
        Wi-Fi enable robot which could be controlled over the internet. It also had a plethora of sensors which
        guided in navigation and control.
Techniche Universität Dresden                                   Dresden, Germany
    **Master of Science, Distributed Systems Engineering**               *2012 – 2014*
        Completed courses in Security and Cryptography, Software Fault Tolerance and Dependable Systems
        other than the mandatory courses. Also worked in the Systems Engineering Lab and Software Fault
        Tolerance Lab. Under the guidance of Prof. Dr. Christof Fetzer Now in the process of completing
        the Master's Thesis. Implemented and evaluated a partitioned Zookeeper service to increase the
        throughput of Zookeeper without the negative effects of horizontal scaling.

## Projects

JoQuer: Turbo frequency scaling libraries
        Modern generation processors like the Intel Haswell series have the ability to temporarily boost the clock
        frequency by writing to certain registers. A C++ library was developed at the Systems Engineering chair at
        TU Dresden to provide this functionality to applications and manage them. I was given the responsibility
        of exposing this functionality through a Java library with a similar API through JNI(Java Native Interface).
        After the library was implemented, benchmarked and recorded the result to compare the effect of boosting
        frequency in Java applications.
Studybloxx: Android list sync application (https://github.com/arjunrn/studybloxx-server)
        For a course in Mobile Application development developed an application for Android which syncs
        structured data across devices. The sync is performed with a Django web application through a REST API.
        To further improve the application functionality LibGit2 has been cross-compiled to run on Android to
        sync the data. Git is used to handle the issues arising out of concurrent modification of data from multiple
        sources.

## Skills

**Technical Specialities:** I consider myself language agnostic and I quickly learn and put to use any program-
        ming language which is required for the task at hand. However, Python is my favourite and go-to language
        for most problems. I have used many Python based libraries and frameworks over the course of career.
        I am very familiar with Django, Scrapy, Google AppEngine, Tornado, Fabric, pyOpenSSL. I have also a
        good understanding of Frontend web technologies: HTML+CSS, JavaScript(jQuery, Angular.js). I have
        also some experience with developing web applications using PHP, Ruby and node.js. All my projects are
        managed through Git or Mercurial. I also have substantial experience developing beautiful native Android
        applications. Most of my knowledge of Java comes from developing Android applications. Recently I
        have dabbled in Go and Haskell to solve some concurrency based problems for my courses. I also have
        some experience using and tuning databases like MySQL, PostgreSQL, MongoDB and Redis. I have also
        been using Linux both professionally and for personal use for the past 6 year.
**Natural Languages:** English *(Bilingual Proficiency)*, Hindi *(Native)*, Kannada *(Native)*,German *(Limited profi-
        ciency)*.

## Interests

**Non-exhaustive and in no particular order:** Science-Fiction, photography, hardware hacking, travelling,
        good coffee