

Akshay Jaggi

<https://akshay.jaggi.co>

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Email : akshay@jaggi.co

Mobile : +91-8886787185

EDUCATION

- **International Institute of Information Technology** *Hyderabad, India*
Bachelor of Technology in Computer Science and Engineering *July 2012 – July 2016*
GPA: 9.17/10.0; Branch Rank #3
- **The Air Force School** *Delhi Cantonment, India*
Senior Secondary, CBSE; Average: 94.3% *2011 – 2012*
Secondary, CBSE; CGPA: 9.8/10.0 *2009 – 2010*

EXPERIENCE

- **Google**
 - **Software Engineer** *Bangalore, India*
Datascopie Search Infrastructure *March 2022 – present*
 - Bootstrapped the team from the ground up in a newly forming org in India
 - Hired 10+ candidates for the org, conducting more than 30 fit calls
 - As the sole resident Search expert on the org, responsible for ramping up the new hires
 - As **Technical Lead**, responsible for direction, execution and delivery of multiple projects supported by the team, including **Real Time Feature Monitoring (RTFM)**, Anomaly Detection, AutoIntent Horizontal Monitoring
 - Regularly working with Data Scientists, SREs, Language Specialists, Feature Teams, Infrastructure Teams, Release Engineers across 4 Product Areas: Search, Assistant, Youtube and Maps
 - **Software Engineer** *Mountain View, California*
Search Fulfillment SRE *October 2020 – March 2022*
 - Started the **Search End-to-End Reliability (SEER)** project to monitor the end-user perceived reliability of **Search**
 - Prototyped, got buy-in from leadership and evangelized the solution across multiple teams in Search
 - As **Technical Lead** of the federated group across 4 teams (approx. 20 people), responsible for the overall direction, consensus and infrastructure
- **Jaggi Infotech Private Limited** *New Delhi, India*
 - **Founder** *January 2020 – September 2020*
 - Using technology to streamline the financial activities of Micro, Small and Medium Enterprises (MSMEs) in India
- **Google**
 - **Software Engineer** *Dublin, Ireland*
Assistant SRE, Search Intelligence SRE, Search Backend SRE *October 2016 – July 2019*
 - Worked on the reliability of Google **Search** and Google **Assistant**, with contributions spreading across serving infrastructure, microservices, production monitoring and alerting, load balancing, memory allocation, capacity planning, turn-ups and turn-downs of Search and related services in Google datacentres
 - Handled multiple major+ outages in Search and Assistant
 - Regularly conducted hiring interviews and trained new hire SREs
 - Led a group of engineers during a code-yellow to build a Real Time Feature Monitoring (RTFM) system for Google Assistant
 - RTFM became very successful (Google has applied for a patent on RTFM), and is now the de-facto feature monitoring system for Assistant and Websearch and being prototyped for Youtube and Maps
 - Evangelized the project in multiple forums, like SRE All Hands and Summits
 - **Software Engineering Intern** *Mountain View, California*
Search Infrastructure *May 2015 – July 2015*
 - Worked on the middle tier of Google Search Serving stack, specifically on the component responsible for combining results from multiple backends into the final structured page by analyzing and operating on the relevancy scores
 - Migrated late-request RPCs to use a new, simpler parallelisation scheme
- **Google Summer of Code**
 - **FreeBSD Foundation** *Summer 2018*
Mentor
 - Mentored a student on importing Xen grant-table bus.dma(9) handlers from OpenBSD to FreeBSD
 - **FreeBSD Foundation** *Summer 2016*
Student
 - Implemented a character device to expose the Xen Hypervisor grant-tables to userspace, allowing userspace programs and drivers to share memory between virtual guests
 - Project Proposal ([link](#)); Progress Blogpost ([link](#)); Final Submission ([link](#))
 - **Haiku, Inc.** *Summer 2014*
Student

- Implemented the LibUSB backend for HaikuOS
- Improved the eXtensible Host Controller Interface (xHCI) driver in HaikuOS, allowing HaikuOS to boot from USB 3.0
- Fixed bugs in the UHCI and EHCI USB drivers
- Project Proposal ([link](#)); Blog ([link](#))

● **International Institute of Information Technology**

Hyderabad, India

○ **Teaching Assistant**

Compilers Course

Monsoon 2015

- Incharge of designing the structure and deliverables for the course project of implementing a compiler for the decaf programming language
- Responsible for conducting tutorial sessions and for grading quizzes, assignments, course projects and examinations

○ **Teaching Assistant**

Computer Programming Course

Monsoon 2014

- Responsible for conducting practical tutorials and examinations
- Curated assignment problems for around 300 freshmen taking the course

○ **Students' Parliament**

General Secretary

April 2015 - April 2016

- Primary liaison between faculty, administration and students of the university
- Led the Executive Wing of the Parliament and worked towards bettering student academic and cultural life on campus
- Established the Student Academic and Counselling Board (SACB) responsible for maintaining an active discourse on academics and research at the university

○ **Students' Parliament**

Elected Member

April 2014 - March 2015

○ **Admin - Open Source Developers Group**

2014 - 2015

- Conducted sessions to introduce freshmen and sophomores to Free and Open Source (FOSS) software
- Sessions were focussed on available open source softwares, different types of licences, how to get involved and start contributing to open source software

○ **Organiser and System Admin - Felicity Threads**

November 2014 - February 2015

Felicity Threads is the annual technical festival of IIIT Hyderabad

- Researched and selected the events and competitions to be a part of the festival
- Recruited people to work on specific roles necessary for the festival
- Responsible for the entire technical infrastructure of the festival, setting up and maintaining mail servers, reverse proxy, databases, containers, and ldap

PATENTS, AWARDS & HONOURS

● **Patent - US 2022/0165259 A1**

May 26, 2022

Low Latency Automated Identification of Automated Assistant Function Failure ([link](#))

● **Spot and Peer Bonuses**

Received more than 20 spot and peer bonuses, including a spot bonus for RTFM from the VP of Search and Assistant

● **Branch Rank 3**

2016

Among students graduating with B.Tech. in CSE from IIIT Hyderabad in the year 2016

● **Commendation Certificate**

2016

For all round performance and contributions in the fields of Campus life and IIIT-H services

● **Dean's List**

Awarded for Excellence in Academics - For being in the top 5% of the class

TECHNICAL SKILLS

Programming Languages

C++, C, Python

Tools and Utilities

Git, Perforce, Svn, Mercurial, L^AT_EX, SQL, Flex, Bison, Octave

Web Technologies

Django, React, HTML/CSS

Containers and Hypervisors

Docker, Xen

Operating Systems

Linux, MacOS, Windows, FreeBSD

SPORT PROGRAMMING

● Ranked 913 in **Google CodeJam 2013** Round-2. **India Rank - 11**

● My team *Heuristics* ranked **4th** in the **2015 ACM-ICPC Asia Chennai Regional** Contest ([link](#))

● My team *TheHeuristics* ranked **2nd** in the **2014 ACM-ICPC Kharagpur Online** Contest and **7th** in the **Kharagpur Onsite** Contest ([link](#))

● Wrote a blogpost explaining the construction of my favourite data structure, **Suffix Automata**, to help fellow sport programmers. ([link](#))