

# Pranav Kant

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## Education

### University of Utah

M.S., COMPUTER SCIENCE

Salt Lake City, Utah, USA

August 2018 - May 2020

### National Institute of Technology

B.TECH., COMPUTER SCIENCE AND ENGINEERING

Hamirpur, Himachal Pradesh, India

August 2011 - May 2015

## Skills

**Programming** C/C++, Javascript, Python, Bash, Java, Ruby, LaTeX, Haskell

**Web** Django, Express, Rails, Flask, HTML5

**Design** Adobe Photoshop, GIMP, Inkscape, Adobe Flash

**Softwares/Libraries** Git, MongoDB, Redis, Neo4j, MySQL, PostgreSQL, Boost, GTK+, Cairo, Metasploit

## Work Experience

### Collabora

SOFTWARE ENGINEER

Remote

Jan 2016 - Jul 2018

- Developed a C++ API to expose comments in LibreOffice core, and tunneled them to the browser via LibreOffice Online backend.
- Created a framework to tunnel dialogs from LibreOffice in headless mode to browser.
- Framework for exposing context-menus in LibreOffice Online.
- Hardened LibreOffice Online by implementing security headers, and identifying and fixing several security bugs.

### Jugnoo

BACKEND DEVELOPER

Chandigarh, India

Jul 2015 - Jan 2016

- Maintained backend authorization module used by several Jugnoo apps for authentication; worked on several bugfixes on day to day basis.
- Developed a user referral leaderboard using Redis sorted sets and CSV file importer for the backend support team.
- Integrated PayTM (digital wallet) and Google sign-in in the Jugnoo app backend.

### Google Summer of Code 2015 (LibreOffice)

STUDENT DEVELOPER

Hamirpur, India

May 2015 - Aug 2015

- Wrote a Gtk+ widget in C++ to expose LibreOffice functionality, and integrated it successfully in gnome-documents.

### Google Summer of Code 2014 (GNOME)

STUDENT DEVELOPER

Hamirpur, India

May 2014 - Aug 2014

- Added support for browsing DLNA media servers in gnome-photos, GNOME's photo management application.

### Woocation

CO-FOUNDER

Hamirpur, India

May 2012 - Aug 2013

- Bootstrapped a startup idea - a recommendation engine based travel platform providing optimized routes, weather updates and places to visit.
- Used Natural Language Processing (NLTK package) to expose flight connection, weather, and transportation data in human-readable format.
- Used AWS based Hadoop clusters to crunch OpenStreetMap data to find optimized distances between cities using OSRM (Open Source Routing Machine.)

## Conferences & Talks

Oct '17 **Google Mentor Summit**, Invited to represent LibreOffice

San Francisco, USA

Oct '17 **LibreOffice Conference**, Talk on "Native comments" and "Dialog tunneling"

Rome, Italy

Sep '16 **LibreOffice Conference**, Talk on "New features in LOKDocView widget"

Brno, Czech Republic

Sep '15 **LibreOffice Conference**, Talk on GSoC '15 project, "Integrating LibreOffice with GNOME"

Aarhus, Denmark

Aug '15 **GNOME Conference**, Talk on GSoC '15 project, "Integrating LibreOffice with GNOME"

Gothenburg, Sweden

Jul '15 **Fedora Conference**, Talk on "Automated UI testing"

Pune, India

Jul '14 **GNOME Conference**, Talk on GSoC '14 project, "Browsing DLNA Media servers"

Strasbourg, France

## Community contributions

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### Mozilla Developer

MOZILLA

Jan 2014

- Exposing raw data on UDP sockets

### Fedora Packager

THE FEDORA PROJECT

Oct 2014 - PRESENT

- Maintainer of SFML, soundconverter, sshrc, proxychains-ng in Fedora repositories. Reviewer and tester of Fedora packages.

### GNOME Developer

GNOME

Jan 2014 - Jan 2016

- Automated UI testing. Several bugfixes in gnome-photos and gnome-documents.

## Projects

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### Program Dependence Mesh: A data-driven interpretation of imperative programs

UNDERGRADUATE THESIS

Aug 2014 - May 2015

- Invented a synthesizable representation, called Program Dependence Mesh (PDM), of programs written in imperative languages.
- Used LLVM to write a compiler pass to generate PDM from LLVM IR. The target of PDM is a unified platform that can be used as an ASIC, a CPU, or even a CGRA.

### Sentimental Analysis in Hindi

COURSE PROJECT

Dec 2014

- Gathered synsets in Hindi using the Hindi SentiWordNet and experimented with subjective lexicons, ngram, weighted ngram using NLTK.
- Trained an ensemble from several classifiers: Naive Bayes, SVM, Logistic Regression, and Random Forest.

### Fingerprint authentication platform

CONSULTANT DEVELOPER

Aug 2013 - Oct 2013

- Next generation secure login system using NBIS. Reverse-engineered Windows drivers for Futronics fingerprint scanner.

## Extracurricular Activity

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### Google Summer of Code 2017

MENTOR

May 2017 - Aug 2017

- Mentored a GSoC project on LibreOffice Online to successful completion.

### GNU/Linux User Group (GLUG-NITH)

SYSADMIN & CLUB LEAD

NIT Hamirpur

May 2012 - May 2015

- Installed & maintained one of the few Ubuntu, Fedora, BOSS, GNU, kernel.org, LinuxMint, and LDP mirror servers in India.
- Installed and maintained club's mail server, web server, wiki, and local project hosting.
- Organized inaugural events: Software Freedom Day, Linux Installation fests, NITH Hackathon, Codechef Coding Competition, and educational meetups.

### Computer Science & Engineering Community (CSEC)

SYSADMIN & TECHNICAL CLUB LEAD

NIT Hamirpur

May 2013 - May 2015

- Represented NIT Hamirpur in IIT Delhi and IIT Mumbai annual technical competitions.
- Organized NITH Hackathon; inaugurated ACM ICPC Chapter and CodeChef chapter.
- Conducted several coding competitions as part of CSEC annual technical festival.