

Pranav Kant

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Education

University of Utah

M.S., COMPUTER SCIENCE

Salt Lake City

August 2018 - May 2020

National Institute of Technology

B.TECH., COMPUTER SCIENCE AND ENGINEERING

Hamirpur, India

August 2011 - May 2015

Work Experience

Collabora

SOFTWARE ENGINEER

Cambridge, UK

Jan 2016 - PRESENT

- Second highest contributor worldwide to LibreOffice Online.
- Created a monitoring console from scratch to monitor the LibreOffice Online server from the browser.
- Developed a C++ API to expose comments and change-tracking in LibreOffice core, and then used it to tunnel comments to the browser via LibreOffice Online backend.
- Worked on dialog interaction in the browser by tunneling dialog bitmaps and mouse/key events from LibreOffice in headless mode.
- Developed responsive UI design of LibreOffice Online front-end.
- Developed C++ API for exposing context menus in LibreOffice core, and then used it to add context menu support for LibreOffice Online in the browser.
- Overhauled the LibreOffice Online front-end build system by packaging and bundling JS files using 'browserify'.
- 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

Honors & Certificates

	Certificate of Appreciation , Awarded by Computer Center, NIT Hamirpur, for reporting and fixing major security vulnerabilities in college server: Microsoft SQL server vulnerability found by using Metasploit, SQLi, and XSS at few places in the website.	NIT Hamirpur, India
2014	Winner , Annual Coding competition at ISTE (Indian Society of Technical Education)	NIT Hamirpur, India
2014	Winner , Annual Coding competition at Nimbus, NITH's Annual Technical festival	NIT Hamirpur, India
2013	Winner , Annual Coding competition at Nimbus, NITH's Annual Technical festival	NIT Hamirpur, India
2010-11	Head Boy , Represented and led school student body	D.A.V. Mandi, India

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

Community contributions

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

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

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 Ubuntu, Fedora, BOSS, GNU, kernel.org, LinuxMint, and LDP mirror servers. We were among the few mirrors in India.	
• Developed & maintained pastebin, exam result software on student server.	
• 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 college 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.	