

# Shikher Verma

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## Work Experience

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- **Research Intern, Secure Systems Lab NYU** *under Prof. Justin Cappos, May-July 2017*
  - Proposed an extension of git push certificates to make git servers trustless and resilient to hacks.
  - Developed patches for git to extend git push certificates and sent them to git mailing list for review.
  - Contributed to in-toto, a framework to secure the integrity of software supply chains.
  - Worked on integrating in-toto in OpenSUSE linux to increase security of packages.
  - Contributed new features, bug fixes and tests to the in-toto framework.

## Open Source Projects

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- **Autonomous Underwater Vehicle, robotics project** *under Prof. K.S. Venkatesh, 2014-2017*
  - **Software Team Head**, lead a team of 5 students since August 2015.
  - Achieved **2nd place** at national level competition NIOT-SAVE in our debut attempt. (December 2016)
  - Robot capable of navigating and performing various tasks independently under water.
  - Using OpenCV for Vision and Gazebo for simulator tests. Built using Robot Operating System.
  - Set up Travis CI for automating building and deploying Doxygen docs to github gh-pages.
- **Keyboard Ninja, Rails game** *October 2016*
  - Online multiplayer typing game. The game is live at keyboardninja.herokuapp.com
  - Developed RESTful APIs for creating, joining games and getting result.
  - Built using Rails, Coffeescript, Postgres and deployed on Heroku.
- **Antaragni Android App** *May-October 2015*
  - Built the Android application for the golden jubilee of Antaragni, cultural festival of IIT Kanpur.
  - Users can view schedule, event details, venue map and contact details of event organizer.
  - Notifications, result declaration, reminders are provided through FCM.
- **Android C IDE** *under Prof. Amey Karkare, January-April 2015*
  - Users could write and run interactive C language programs, include standard library.
  - Cross compiled tiny c compiler and libraries for different android architectures.
- **Startup Weekend** *March 2015*
  - Secured 3rd place for developing a prototype app which helps find people to play sports with.
  - After choosing a sport, users could view players on map and chat with all online players.
- **Notable Open Source Contributions**
  - html-textview, added support for external image downloading libraries.
  - Materialistic Hacker News, added option to reload saved page if offline data is cleared.

## Technical Skills

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Languages	Kotlin, Java, Python, Ruby, C/C++, TypeScript, JavaScript, Bash, HTML5, CSS
Frameworks/Tools	Android SDK, AngularJS, Rails, ROS, OpenCV, Bootstrap, Jekyll, Jenkins, Docker

## Positions of Responsibility

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- **Google Developer Group Lead Coordinator** *2015-2016*
  - Taught more than 15 sessions on Android, including tutorials for Software Architecture (CS654).
  - Guided about 80 people through Google Study Jam and CS for Android online courses.
- **Student Guide** *2015-2016*
  - Helped 7 new students while they familiarize with the rigours of college life.
- **Mentoring Projects**
  - Facilitated 3 students in various robotics club projects and 6 students in programming club project.
  - Member of Navya, FLOSS group. Mentored 5 students in contributing to open source.

## Extracurricular activities

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- Secured 1st place in intra-college tournament Josh Chess 2015. Part of college chess team 2014.
- All India Rating Chess Tournament 2012, secured 56th place amongst 200 participants.
- Secured 2nd position in Basketball in Freshers Inferno in 2014, intra-college sports event.
- Secured 2nd position in Lucknow Zonal Basketball Championship 2013.