




# Shashwat Garg

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 Shashwat-Garg

## Relevant Coursework

- Advanced Data Structures and Algorithms
- Probability and Random Processes
- Algorithm Design and Analysis
- IoT Systems and the Cloud
- Database Practicum
- Pattern Recognition
- Artificial Intelligence
- Introduction to Communicating Distributed Processes
- Large Applications Practicum

## Skills

### Languages

C, C++, JavaScript, PHP, Java  
Python, Android Development

### Tools and Utilities

Git, Android Studio, MongoDB  
Visual Studio, MySQL, Node.JS  
Red Hat OpenShift, Salesforce  
Openframeworks

## Honors & Awards

**Runner-up in Aavishkar | IIT Mandi** - Stood 2nd out of 27 teams in the Technical Competition Aavishkar for the project - OculoScripter.

**Runner-up in Topcoder Hackathon | Topcoder** - Stood 2nd in the Hackathon organised by Topcoder in the College campus, for the project - CodeAssist.

**Special Mention for Design Practicum Project | IIT Mandi** - Earned Special Mention for the flawless operation of the Design Practicum Project - Helpful Security Lock.

**Special Mention Award | IIT Mandi** - For the contribution and performance in Volleyball team of the institute.

## Education

### B.Tech., Computer Science and Engineering

Indian Institute of Technology Mandi

GPA: 9.1

## Projects

Aug 2019- Present **Distributed Formal Concept Analysis**  
Major Technical Practicum Project | Mentored by: Dr. Sriram Kailasam  
**Tools:** Java | Kafka | ZooKeeper | HDFS

- Built a Fault-tolerant distributed system for irregular applications like Formal Concept Analysis with Linear time Closed itemset Miner.
- Currently uses only LCM, plan to extend to other algorithms too.

Feb 2019- May 2019 **TrackPatt** <http://github.com/Shashwat-Garg/TrackPatt>  
System Practicum Project | Mentored by: Dr. Aditya Nigam  
**Tools:** Linux Kernel | C | Device Drivers | Lock Screen

- Linux Kernel Application that **unlocks the system** and **runs** a user decided **application**, when **user draws** a predefined **pattern** on the track-pad (similar to unlocking a smartphone by gesture).
- Allows primitive patterns for now, can be extended to complex ones.

Feb 2018- May 2018 **Helpful Security Lock** <http://github.com/Shashwat-Garg/helpful-security-lock>  
Design Practicum Project | Mentored by: Dr. C.S. Yadav  
**Tools:** Python | Raspberry Pi 3 | Various Recognition libraries

- Aims at **enabling the differently abled** (as well as normal people) to easily ensure the security of their belongings. Differently abled can use **fingerprint or voice recognition** features **or both** easily.
- Uses different modules with combinations of Face, Fingerprint, Speaker, Barcode Recognition, and Pincode authorization.

Sep 2017- Nov 2017 **CodeAssist** <http://github.com/Lasers67/CodeAssist>  
Database Practicum Project | Mentored by: Dr. Arti Kashyap  
**Tools:** Node.JS | JavaScript | Hackerrank API | cURL | HTML | CSS

- A platform for **collaborative coding** (real-time changes to a shared code), along with compile & run (with test cases optionally) and **compilation errors**, and fetches first result on Google for that error.
- Chatbot, friends and one-to-one chatting is also implemented.

Mar 2017- May 2017 **OculoScripter** <http://github.com/Shashwat-Garg/OculoScripter>  
Aavishkar & 6th Inter-IIT Techmeet | Mentored by: Dr. Hitesh Shrimali  
**Tools:** Openframeworks | C++ | Code::Blocks

- People suffering from **ALS or paralysis** are not able to express themselves to the open world. Aim was to make it easier for them to **communicate to the outside world**.
- An openframeworks based c++ software, built on top of the open source project **eyewriter-1.0** with a lot of modifications.

## Experience

Jun 2019 - Aug 2019 **Software Development Intern** Hyderabad  
Microsoft India (R&D) Pvt Ltd.

**Tools:** C++ | OdaSDK

- Loading of Floor Plans of various organizations on Bing is slow
- Optimized these Floor Plans by removing unnecessary details
- Reduced the Floor Plans size by an average of 15%

Jun 2018 - Jul 2018 **Trainee** Delhi, India  
Allsoft Solutions, IBM

**Tools:** Salesforce.com Admin | IBM Cloud

- Learnt using Salesforce.com with Apex classes, Visual force pages, Process and Schema Builders and an introduction to IBM Cloud.
- Did a project on Distance Learning involving all these technologies.