Sourabh Lal

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Education

École polytechnique fédérale de Lausanne (EPFL), Ecublens, Switzerland　　　　　**09/2015 to date**
Pursuing a Masters in Computer Science Degree.

Jacobs University Bremen, Bremen, Germany　　　　　**08/2012 to 06/2015**
Graduated with a Bachelor of Science Degree in Computer Science. GPA: 1.85 (1.00 is best, 5.00 is worst).

Carnegie Mellon University, Pittsburgh, USA　　　　　**08/2014 to 12/2014**
Selected to participate in a 1 semester study abroad program at Carnegie Mellon University, School of Computer Science. GPA: 3.73 (4.00 is best, 0.00 is worst).

The British School, New Delhi, India　　　　　**08/2008 – 05/2012**
Completed International Baccalaureate (IB) with 39 points (out of a total of 45) with Mathematics, Computer Science, Physics, and Economics at Higher Level. Graduated as Outstanding Student of the Year (First in Class).

Skills and Achievements

Awards and Honours:	• MLH Prime EU, London 2017 – JP Morgan Prize for Best Hack for Social Good • KairosHacks Barcelona 2015 – Best project involving SkyScanner API • jacobsHack! Winter 2014: 3rd prize overall, 1st prize in the USG category. • Merit based 10,000 Euro Scholarship per year from Jacobs University (2012-2015)
Programming Skills:	Advanced knowledge:　Java, Python, HTML5, CSS3, jQuery, LaTeX, SML Working knowledge:　JavaScript, Android Development, C++, Visual Basic, SQL, C Basic knowledge:　MatLab, Prolog, Assembler
Other Tech Skills:	Proficient in Git, Django, Microsoft Office, Windows OS Working Knowledge of Linux, SVN, Adobe Photoshop, Google SketchUp, Adobe Premiere.

Work Experience

CERN, Geneva, Switzerland　　　　　**08/2016 – 01/2017**
Software Developer in the CERN Document Server (CDS) team. Worked in an agile environment on an open source project with tasks varying across the full-stack from high level web application development to low level system programming. Day to day tasks involved working with Flask, Jinja2, AngularJS, SQLAlchemy and PostgreSQL.

Jacobs University Bremen, Bremen, Germany　　　　　**02/2015 – 05/2015**
Student Assistant for Dr. Sergio Grimbs. Responsible for development, testing and maintenance of CometaDB – a Django web application used to store experimental and contextual data of cocoa beans. Additional tasks include administration of the system infrastructure.

Cleversoft GmbH, Munich, Germany　　　　　**06/2014 – 07/2014**
Internship in the Java Engineering team as a trainee application specialist. As a full team member, I was working on the development and maintenance of the Infonds financial services solution using Java and JSF as well as industry standard tools such as JBoss and SEAM. Additionally I used SQL and Hibernate to make updates to the system database in order to make it compatible with my new features.

Jacobs University Bremen, Bremen, Germany　　　　　**08/2013 – 12/2013**
Teaching assistant for the course "Computer Architecture". Responsible for making and grading assignments, conducting tutorials based on course material and assisting students in grasping concepts they are having difficulty understanding.

Fraunhofer ITWM, Kaiserslautern, Germany　　　　　**06/2013 – 08/2013**
Internship in Optimization department of Fraunhofer ITWM. The project assigned to me was central to the department, and intended for long-term usage. It involved using C++ through the Boost UBLAS Library and QHull. My task was to write a software to pre-compute the non-convex solution space of pareto optimal solutions. Additionally I dealt with complex data structures such as n-dimensional Quadtrees and binary space partitions (BSP) to increase the efficiency of the software.

Project Experience

Hackathon Project: DoctorBot/PocketDoctor　　　　　**09/2016 to 10/2016**
Developed a chatbot for medical diagnosis. Can be conversed with through SMS or through Facebook messenger. How I built it: Flask server running on Heroku. Twilio & Facebook Messenger APIs for interface and Infermedica API for diagnosis.

Bachelor's Thesis: Developing User Interfaces for the KWARC Annotation Tool   02/2015 to 05/2015

Working with Prof. Dr. Michael Kohlhase's KWARC research team, I developed the frontend for an annotation tool using jQuery with the aim of optimizing system usability and improving the user experience. The project consisted of 3 main components: conducting design research, developing the system's user interface, and evaluating the results by comparing the user experience and usability of the new system against the previous iterations of the KWARC annotation tool and other state of the art annotation tools in the market.

Data Collection with CoBot   08/2014 to 12/2014

Iteratively developed a path planning algorithm that enabled Dr. Manuela Veloso's CoBot robots to opportunistically collect temperature and humidity data from less recently explored locations by maintaining historical maps of exploration of the Gates-Hillman Centre, Carnegie Mellon University.

Hackathon Project: LaunchPad Django Web Application   10/2015

Developed a web app that will help businesses find the ideal physical location to setup their base. It works by collecting data on several factors through several APIs and visualizing this data as a heat map on a city of the user's choice.

Django Web Applications at Carnegie Mellon University (yubiDibuy and Grumblr)   08/2014 to 12/2014

Used Django+Python to develop dynamic web applications by creating a social network similar to Twitter called Grumblr. For the final project, along with a partner, I developed a reverse auction site called yubiDibuy.

Android App – Remindoor   09/2014 to 12/2014

As part of a team of two, I worked on developing a prototype for a smart door by creating an Android app that simulates the interactions of the smart door. The Remindoor app consisted of 2 parts: A Virtual Doorman that interacts with visitors, then records and reports all such interactions to the resident, and a Reminder alert system which provides the resident with all important information and reminders he will need before he leaves home. Used Android and Snapdragon SDKs along with OpenWeatherMap, Google DistanceMatrix and USA Today Breaking News APIs in order to develop the app.

Mobile Robot Programming Lab   8/2014 to 12/2014

Working in a team of 3, used MATLAB and Neato household vacuum robots that have been converted to mini forktrucks to incrementally develop a software system that enabled a mobile robot to pick up a set of wooden pallets and move them to a drop off point.

jMaps   10/2013 to 06/2014

Developed a web application called jMaps along with my roommate as an interactive map, and directory for the 4 colleges at Jacobs University, using the pre-exiting jPeople application in the back-end.

Race Car Simulator   03/2014 – 04/2014

Developed and implemented a race car simulator in a team using C++. Given a file with the AI the car uses, the simulator interprets the language on the client, and sends commands to the car over the network, guiding it around obstacles to the finish line.

Extracurricular Activities

Founder and Main Organizer of LauzHack   03/2016 to date

Founder of LauzHack – EPFL's first global hackathon, with the goal of promoting hackathons at the university and motivating students to work on projects outside their academic schedule. Main organizer for the 2016 event which took place in Noveber 2016 and had over 180 participants.

University Student Government, Jacobs University Bremen, Bremen, Germany   10/2013 – 06/2015

Member of 5-person Housing and Facilities Committee, responsible for maintaining and improving facilities on campus based on the student body's requirements. From January 2015, I became chair of the committee.

College Nordmetall Floor Representative, Jacobs University Bremen, Bremen, Germany   09/2013 – 06/2014

Official representative of students living on my floor in my residential College; College Nordmetall. Responsibilities include organizing floor events, keeping track of the floor budget, and being the official voice of my floor in bi-monthly College meetings.

Miscellaneous

Languages: Hindi (native)   English (fluent)   French (intermediate)   German (basic)

Further Education: Coursera - Algorithms and Data Structures I

Hackathons: JacobsHack! Winter 2014, KariosHacks Barcelona 2015, JacobsHack! Fall 2015, HackUPC 2016, StartHack 2016, HackZurich 2016, JacobsHack! Fall 2016, StartHack 2017, MLH Prime EU 2017, CopenHacks 2017.