

# Mihir Kumar

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## EDUCATION

**University of Illinois**, College of Engineering Urbana-Champaign, IL  
Bachelor of Science (B.S.) in Computer Engineering December 2019

### Coursework and Honors:

Data Structures (Honors), User-Driven Design, Digital Systems Lab, Artificial Intelligence, Processor Design, Operating Systems, Algorithms & Models of Computation, Cyber Security, Discrete Mathematics, Computer Architecture, Probability with Reliability and Engineering Applications, Linear Algebra, Analog Signal Processing, Multivariable Calculus

## EXPERIENCE

**University of Illinois at Urbana-Champaign** Champaign, IL  
Software Intern May 2017 – Present

- Refactoring and developing the user registration system for an **in-browser web development platform** called WebEdit which allows users to develop and test custom HTML, CSS, and Javascript code right within the browser. (Django, Python, PostgreSQL, HTML, CSS, Javascript)
- Created a Puppeteer API based tool that can analyze web pages for compliance with accessibility web standards. (Javascript, Java, Git)
- Designed and developed accessible **ARIA** compliant plug-ins for the **open source** web browser based text editor **CKEditor 4** to optimize test management (Javascript, CKEditor4 API, Git)
- Developed an accessible Test Adapter for **Windows UI Automation** framework that drives test efficiency. (Python, C++, Git)
- Led the design and implementation of a test compliance automation synthesizer for popular web browsers with **ARIA** accessibility standards on **Windows**.

**The Unica Group, Pennsylvania** Champaign, IL  
Intern Consultant May 2016 – August 2016

- Installed, configured and developed a Docker platform on Linux to host virtualized applications
- Developed a cloud transition strategy for complex transactional systems to drive cost efficiencies
- Developed hybrid infrastructure design pattern for applications to co-exist between on-prem and cloud
- Optimized application performance and developed automated regression suites for testing

**National Informatics Centre, Government of India** New Delhi, India  
Software Engineering Intern June 2015 – August 2015

- Led the software requirement specifications sessions with the IT Directors and their key staff for an improvised workload management system
- Developed detailed software design that helped in updating obsolete software in the organization

**National Informatics Centre, Government of India** New Delhi, India  
Software Engineering Intern Sep 2013 – Oct 2013

- Developed front-end layout of "Cement Information System (e-CIS)" using ASP.NET and SQL Server database

## RESEARCH

**Privacy Preserving Record Linkage (PPRL)** Aug 2015 – Jan 2016

Mentor: Vincent Bindschaedler ([www.vbinds.ch](http://www.vbinds.ch))

- **Privacy Preserving Record Linkage** - identified records that map to the same individual from multiple databases without revealing the identity of the person and the contents of the database
- **PPRL Regression Model** – developed a regression algorithm that indicates matches over a public voter dataset to determine real-world performance of popular PPRL protocols.
- **Using Python to develop protocols** – implemented selected PPRL protocols in Python and analyzed their runtime and accuracy using binary comparison and bloom filters

## PROJECTS

**Riskulizer** (<https://devpost.com/software/riskulizer>)

- **Risk Analyzer** built at ORMIR/AXIS Re Future of Insurance **Hackathon** 2017
- **Visualization tool** built on top of **AXIS insurance data** to analyze insurance risk of natural calamities across various regions in the world
- Won **Best User Interface** and **runners up overall**
- Built with **Flask**, **Bootstrap** and **d3.js**

## LANGUAGES TOOLS

Python, Javascript, C/C++, HTML/CSS, SystemVerilog, SQL  
Git, Django, Flask, React, Docker, jQuery, Flutter, PostgreSQL