

# Rishabh Asthana

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## EDUCATION

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**University of Illinois at Urbana-Champaign**  
*Bachelor of Science, Computer Science*

*Dec 2018*  
*Technical GPA: 3.73/4.00*

## WORK EXPERIENCE

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**University of Illinois at Urbana-Champaign**  
*Computer Science Employee*

*Champaign, IL*  
*Sep.2017 - Present*

- Visualized flow networks with up to 8000 nodes using D3.js, JavaScript under Professor Eric Gene Shaffer
- Created a web service using Node.js/Express backend which allows users to upload graph descriptions, visualize and compare them in different layouts in an interactive manner

**Exegy, Inc.**  
*Software Engineering Intern*

*St Louis, MO*  
*May 2017 - Aug.2017*

- Designed a web interface using Python/Flask backend, HTML5/CSS/Bootstrap frontend for an extensively used testing utility for simulating trade events, streamlining the testing process
- Profiled the C and Java API and demonstrated up to 5 times performance differences; ensured fairness by accounting for cache effects, data validity, and non-uniform memory access isolation
- Extended functionality of testing utility written in C, allowing manipulation of UDP packets in data logs
- Created a memory pool in C; performed regression testing by writing unit tests and Jenkins integration

## PROJECT EXPERIENCE

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**“Ethereal Viz” Web Application**

*Nov.2017*

- Designed and developed a web based music visualizer using Web Audio API, THREE.js, Node.js/Express, Materialize, which allows users to upload their music to any browser via simple drag-drop and have real time audio reactive visuals generated which run at 60 fps on 1080p resolution on integrated GPUs
- Added Spotify integration and ability to generate visuals based on microphone input.

**“GitPortal” Android and IOS Mobile Application**

*Oct.2017*

- Created a cross platform (Android/iOS) mobile application using React-native, JavaScript to provide a handle for GitHub allowing users to view their profiles, search and (un)star repositories, (un)follow users.
- Ensured responsive design and user authentication using GitHub OAuth access tokens

**Steganography Toolkit**

*Dec.2016*

- Worked with a team of 3 to develop a steganography toolkit capable of hiding any data file in multiple media formats using C, while introducing minimal noise in data and maintaining high entropy by encryption
- Augmented WAV data segment to store extra information, eliminating the need to retain the original file

## ACTIVITIES AND LEADERSHIP

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**UIUC SAIL 2017:** Co-presented workshop on steganography to class of 35 high school students

**UIUC Hour of Code 2017:** Volunteered to mentor students between grades 2 and 5 using Khan Academy

**Club [0]:** Cofounded CS club in Manipal University, presented workshops on cryptography, game development

## SKILLS

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**Languages:** C, C++, Python, JavaScript, Processing, Java, HTML5/CSS, Awk, Assembly

**Technologies:** React.js, React Native, Node.js, Express, JUnit, Mocha/Chai, Flask, THREE.js, Docker, Nginx, MongoDB, Git, Semantic-UI, Bootstrap, AWS, Heroku, Raspberry Pi, Arduino