

# Varnit Sah

## WORK EXPERIENCE

APRIL 2016 – MAY 2017

Information Technology Services, USC

### *Student Software Developer*

Worked as a part of a scrum team to develop in house applications for USC using AngularJS for client side interactions and Node.js for the back-end service, automating post-development tasks using Gulp.js, deployment using Docker and automation of build pipeline using Jenkins. Assisted in the creation of Data flow diagrams of USC's undocumented financial system.

- **USC Account Translation Tool** : Designed, developed and maintained an online service for viewing and editing financial records. Evaluating load time of records after initial request, yielded an average load time of 250ms.

- **ITS Integration Dashboard** : Designed and developed a dashboard application that presents JSON data in a graphical interface. Reviewed the code and identified redundant HTTP calls leading to a 60% reduction in unnecessary data fetches.

JANUARY 2015 – MAY 2015

e-Infochips Training and Research Academy

### *Software Development Intern*

Developed a Text Prediction and Spell Correction Library in C for use with the Devanagiri script. Evaluated the performance of Trie and Ternary Tree for use with low memory devices. Improved the performance of spell correction for the Devanagiri script by modifying the Damerau-Levenshtein distance algorithm. Modified algorithm resulted in better spell checks by 10-15% in relevant cases.

## PROJECTS

**Voting application:** An application made with a Test Driven Development approach for organizing live votes using React, Redux, Immutable.js and Sockets. Users vote from two choices and the moderator can keep track of the votes in real time.

### **Autocompletion & Spellcheck tool using SOLR:**

Developed an Angular-Node application which queries a snapshot of a news website to receive the most relevant results from the SOLR platform. HTTP calls to SOLR are made via a node.js server.

**Twitter clone:** A Rails application which emulates the tweet functionality of twitter. Users can signup/login, post short messages. Messages are stored in a SQLite database managed by the Rails framework. Deployed on Heroku.

📍	Los Angeles, CA-90007
☎	+1 (323) - 423 - 8285
✉	varnitsah@outlook.com
📄	varnitsah.github.io
🔗	github.com/varnitsah
🔗	linkedin.com/in/varnit-sah-93309a89

**Unix Kernel Development:** Collaborated with four members to implement Processes and Threads, Virtual File System and Virtual Memory components of the Weenix Operating System.

**Inverted Index Search Using Hadoop:** Developed a search engine for a news website by created an inverted index for it by using Apache Hadoop. The map/reduce program executed on a Google Cloud cluster.

**Image Steganography:** Developed a simple windows application in C# which can store snippets of text inside an image.

## SKILLS

LANGUAGES	C, Java, C#, HTML, CSS, Javascript, Node.js
FRAMEWORKS	Bootstrap, AngularJS 1.5, Express, Mocha, Ruby on Rails
LIBRARIES	React, JQuery, Immutable.js
DATABASES	MySQL, MongoDB
TOOLS & TECH	Git, Hadoop, Jenkins, Docker, Heroku, SOLR, gulp.js, AWS, Google Cloud, Linux
OTHER	Flow charts, UML, Redux

## CERTIFICATION

F105-3539	Microsoft Technology Associate - Database Fundamentals
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## EDUCATION

2015 – 2017	<b>University of Southern California</b> MS IN COMPUTER SCIENCE
2011 – 2015	<b>Charotar University of Science and Technology</b> BTech IN COMPUTER ENGINEERING