

# SAI PRASHANTH CHANDRAMOULI

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## SUMMARY

A Computer Science Graduate student specializing in **Web based Security**, with a thesis on **E-Mail Header Injection** vulnerabilities, having over 3 years of experience with **creating** and **designing websites and web apps**, from **UI** with **HTML**, **CSS**, and **JavaScript** to getting down-n-dirty with **server side scripting** using **PHP**, **Java**, **Node.js** and **MySQL**.

## EDUCATION

|  |                    |
|--|--------------------|
| Arizona State University, <i>M.S. in Computer Science</i> . GPA 3.50/4.00                  | Aug 2014 – Present |
| Anna University, <i>B.E. in Computer Science and Engineering</i> . GPA 8.58/10 (4.00/4.00) | March 2014         |

## EXPERIENCE

|   |                     |
|---|---------------------|
| <b>Mozilla Corporation, Cloud Services Intern.</b> <ul style="list-style-type: none"><li>Designed and developed a <b>2-Factor Authentication</b> system for Firefox Accounts using <b>Node.js</b> with <b>Google-Authenticator</b>, and <b>SMS</b> as a backup 2<sup>nd</sup> factor.</li><li>Implemented a <b>Password Strength Checker</b> for Firefox Accounts, using a <b>Bloom Filter</b> that maintains a list of common password hashes, that got merged in Firefox-41 train (to ~90 million users).</li><li>Deployed an <b>HTML parser</b> to scan generated HTML pages and E-Mail translations and remove <b>malicious translations</b> to prevent <b>cross-site scripting</b> vulnerabilities, in Firefox-40 train.</li><li>Ported the <b>Test-linting</b> system from <b>JSHint</b> to <b>ESLint</b> for <b>6 services</b>, improving <b>productivity</b> and <b>code quality</b>.</li></ul> | Summer 2015         |
| <b>Arizona State University, Teaching Assistant.</b> <ul style="list-style-type: none"><li>Evaluated and graded the undergrad projects for the <b>Capstone Project I and II</b>.</li><li>Currently serving as TA for <b>Principles of Programming Languages</b>.</li></ul>  | Fall 2014 – Present |
| <b>Webgyor Waves, Inc., Co-Founder.</b> <ul style="list-style-type: none"><li>Scheduled and managed meetings with clients, analyzed requirements and worked on quotations.</li><li>Engineered websites and web apps – Shopping carts, Inventory Management Systems, and Portfolio Websites using <b>HTML</b>, <b>CSS</b>, <b>JavaScript</b>, <b>AJAX</b>, <b>PHP</b>, and <b>MySQL</b>.</li></ul>   | Jan 2013 – Present  |

## ACADEMIC PROJECTS

|  |             |
|--|-------------|
| <b>Distributed Operations on Apache Spark – Arizona State University.</b> <ul style="list-style-type: none"><li>Built distributed <b>Geometric operations</b> such as Union, Farthest Pair, Shortest Pair and <b>Spatial operations</b> such as Join, Range, and Aggregation, on distributed clusters using <b>Java 7 Spark API</b> and Apache SPARK.</li><li>Showcased a <b>210% performance improvement</b> in processing times on <b>Amazon EC2 Cluster</b> T2-instances, for a <b>5 GB dataset</b>, compared to non-distributed operations.</li></ul>                            | Spring 2015 |
| <b>Operation Knock-Knock – Secret Spy Web App – Arizona State University.</b> <ul style="list-style-type: none"><li>Created a web app with security features like knock sequences, XSS and SQL injection prevention.</li><li>Scanned user input for malicious payloads, and added suitable sanitizations routines, along with URL rewriting.</li><li>Wrote a Python script that automatically generates such an app from a plain English description.</li></ul>  | Spring 2015 |
| <b>Asynchronous Server Platform – Optimization over traditional platforms – Anna University.</b> <ul style="list-style-type: none"><li>Designed and developed an asynchronous server using <b>Node.js</b>, to support a <b>real time game</b> and a <b>stock market system</b>, and made a comparison study with traditional systems built using PHP and Java.</li><li>Benchmarked and showcased a <b>Best-case scenario of 328%</b> improvement in the no. of requests serviced per second, and a <b>worst case scenario of 109%</b> compared to vanilla <b>PHP/Java</b>.</li></ul> | Spring 2014 |

## TECHNICAL SKILLS

**Technologies:** HTML, CSS, JavaScript, AJAX, C, Java, Python, Node.js, PHP, MySQL, Android App Dev, XML, LESS, Git.  
**Frameworks/Libraries:** jQuery, RaphaelJS, Bootstrap, KeylemonJS, jQueryUI, AngularJS, Mocha, Sinon, ESLint, JSHint, Chai, Spring.

## EXTRA-CURRICULAR PROJECTS

|   |                     |
|---|---------------------|
| <b>IdLink Systems</b> <ul style="list-style-type: none"><li>Prototyped a HIPAA compliant multi-factor authentication system using <b>JavaScript</b> and <b>PHP</b> for Dignity Health.</li></ul>  | Fall 2014           |
| <b>Chain reaction – Browser Version</b> <ul style="list-style-type: none"><li>Ported the popular game "Chain reaction" to the browser using <b>HTML</b>, <b>CSS</b>, and <b>JavaScript</b> as an <b>HTML5 app</b>.</li><li>Programmed it to run <b>cross-platform</b> at a small size of <b>6kb</b>, with <b>no usage of any library/framework</b>.</li></ul>   | June 2014           |
| <b>Angel Ceramics</b> <ul style="list-style-type: none"><li>Crafted a full blown inventory control system, complete with <b>user authentication</b>, adding, editing, removing items and <b>exporting the data</b> into other formats (MS Excel .xls, JSON, CSV, etc.) for a ceramics factory.</li><li>Built with <b>PHP</b> and <b>MySQL</b> as backend, and using <b>JS</b> and <b>AJAX</b> to give the user a responsive control system.</li></ul> | Mar 2014 – Apr 2014 |

## HONORS AND AWARDS

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|--|---------------------|
| <b>Best Outgoing Student 2010-2014</b> , <i>MNM Jain Engineering College, Anna University</i> (out of 113 students).   | Apr 2014            |
| <b>Most innovative undergrad project</b> , <i>MNM Jain Engineering College, Anna University</i> (out of 48 projects).  | Apr 2014            |
| <b>Won 49 prizes in 34 State-level and National-level symposiums</b> , in events like <b>Web Designing (17)</b> , <b>Debugging/Coding (7)</b> , <b>Tech Quiz (9)</b> , <b>Paper Presentations (9)</b> , etc. | Aug 2011 – Mar 2014 |