

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, M.S. in Computer Science. GPA 3.33/4.00 Aug 2014 – Present

Anna University, B.E. in Computer Science and Engineering. GPA 8.58/10 (4.00/4.00) March 2014

EXPERIENCE

Mozilla Corporation, Cloud Services Intern. Summer 2015

- Designed and developed a **2-Factor Authentication system** for **Firefox Accounts** using **Node.js** with **Google-Authenticator**, and **SMS** as a backup 2nd factor.
- Implemented a **Password Strength Checker** for **Firefox Accounts**, using a **Bloom Filter** that maintains a list of common password hashes, that got merged in Firefox-41 train (to **~90 million** users).
- Deployed an **HTML parser** to scan generated HTML pages and E-Mail translations and remove **malicious translations** to prevent **cross-site scripting** vulnerabilities, in Firefox-40 train.
- Ported the **Test-linting** system from **JSHint** to **ESLint** for **6 services**, improving **productivity** and **code quality**.

Arizona State University, Teaching Assistant. Fall 2014 – Present

- Evaluated and graded the undergrad projects for the **Capstone Project I and II**.
- Currently serving as TA for **Principles of Programming Languages**.

Webgyor Waves, Inc., Co-Founder. Jan 2013 – Present

- Scheduled and managed meetings with clients, analyzed requirements and worked on quotations.
- Engineered websites and web apps – Shopping carts, Inventory Management Systems, and Portfolio Websites using **HTML, CSS, JavaScript, AJAX, PHP, and MySQL**.

ACADEMIC PROJECTS

Distributed Operations on Apache Spark – Arizona State University. Spring 2015

- Built distributed **Geometric operations** such as Union, Farthest Pair, Shortest Pair and **Spatial operations** such as Join, Range, and Aggregation, on distributed clusters using **Java 7 Spark API** and **Apache SPARK**.
- Showcased a **210% performance improvement** in processing times on **Amazon EC2 Cluster T2-instances**, for a **5 GB dataset**, compared to non-distributed operations.

Operation Knock-Knock – Secret Spy Web App – Arizona State University. Spring 2015

- Created a web app with security features like knock sequences, XSS and SQL injection prevention.
- Scanned user input for malicious payloads, and added suitable sanitizations routines, along with URL rewriting.
- Wrote a Python script that automatically generates such an app from a plain English description.

Asynchronous Server Platform – Optimization over traditional platforms – Anna University. Spring 2014

- Designed and developed an asynchronous server using **Node.js**, to support a **real time game** and a **stock market system**, and made a comparison study with traditional systems built using **PHP** and **Java**.
- Benchmarked and showcased a **Best-case scenario of 328%** improvement in the no. of requests serviced per second, and a **worst case scenario of 109%** compared to vanilla **PHP/Java**.

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

IdLink Systems Fall 2014

- Prototyped a **HIPAA** compliant multi-factor authentication system using **JavaScript** and **PHP** for Dignity Health.

Chain reaction – Browser Version June 2014

- Ported the popular game "**Chain reaction**" to the browser using **HTML, CSS, and JavaScript** as an **HTML5 app**.
- Programmed it to run **cross-platform** at a small size of **6kb**, with **no usage of any library/framework**.

Angel Ceramics Mar 2014 – Apr 2014

- Crafted a full blown inventory control system, complete with **user authentication**, adding, editing, removing items and **exporting the data** into other formats (MS Excel .xls, JSON, CSV, etc.) for a ceramics factory.
- Built with **PHP** and **MySQL** as backend, and using **JS** and **AJAX** to give the user a responsive control system.

HONORS AND AWARDS

Best Outgoing Student 2010-2014, MNM Jain Engineering College, Anna University (out of 113 students). Apr 2014

Most innovative undergrad project, MNM Jain Engineering College, Anna University (out of 48 projects). Apr 2014

Won 49 prizes in 34 State-level and National-level symposiums, in events like Web Designing (17), Debugging/Coding (7), Tech Quiz (9), Paper Presentations (9), etc. Aug 2011 – Mar 2014