

# Shauvik Roy Choudhary

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**OBJECTIVE:** To obtain an internship in the area of web testing and analysis.

## Education

### Georgia Institute of Technology

*PhD, Computer Science (GPA: 4.0)*

- Advisor: Dr. Alessandro Orso (Software Engineering)

Atlanta, GA  
*Aug. 2009 - Present*

### Georgia Institute of Technology

*M.S., Information Security (GPA: 4.0)*

- Project: Web-app penetration testing with improved input vector discovery

Atlanta, GA  
*Aug. 2007 - May. 2009*

### Mumbai University

*B.E. Computer Engineering (First Class)*

Mumbai, India  
*Aug. 2002 - May. 2006*

## Work Experience

### Georgia Institute of Technology

*Graduate Research & Teaching Assistant, School of Computer Science*

- Working on web application testing projects.
- Assisting professors to teach Software Engineering and Security courses.

Atlanta, GA  
*Aug. 2007 - present*

### IBM Research

*Summer Intern, Programming Languages & Software Engineering group*

- Investigated and researched on modern web application faults.
- Added automated JS testing and analysis support to IBM's automated testing portal for developers (khasiana project).

New Delhi, India  
*May. 2009 - Jul. 2009*

### Goldman Sachs Group, Inc.

*Summer Intern, Compliance Technology Group*

- Designed and engineered a web-application for tracking customer inquiries and generating reports enabling the firm to comply to NYSE regulations.

Jersey City, NJ  
*May. 2008 - Jul. 2008*

### HSBC Software Dev. (India) Pvt. Ltd.

*Software Engineer*

- Built J2EE web applications for the HSBC UK Bank (Mortgages project).
- Worked on integrating a code coverage analysis tool for java projects.
- Was awarded an individual award (out of 4000 employees) and a team award for process adherence.

Pune, India  
*Jul. 2006 - Jul. 2007*

## Publications

“Penetration Testing with Improved Input Vector Identification”, W. Halfond, S. Roy Choudhary and A. Orso. In the *Proceedings of the 2nd International Conference on Software Testing, Verification, and Validation (ICST 2009)*.

“Automated client-side monitoring for Web Applications”, S. Roy Choudhary and A. Orso. In the *Proceedings of the 1st International Workshop on Web Testing (WebTest2009)*.

## Selected Projects

### Automated testing of evolving web applications [using Java, JS, Python]

Aug. 09-present

- Developing techniques for detecting client-side issues related to browser compatibility, programmatic and performance related errors.

- JSMon - Monitor JavaScript from the server side [using C, Java, JavaScript]** Jan. 09 - Apr. 09  
 – Developed a set of tools to monitor the client side JavaScript execution and state from the server end. It consists of a command and control server that controls a JavaScript based agent that is dynamically injected into the client response.
- Static & Dynamic Analysis based Penetration Testing [using Java, Python]** Jan. 08 - Dec. 08  
 – Masters Project to improve web application penetration testing tools by leveraging the results of static and dynamic analysis. The current approach focuses on detecting SQL injection & XSS errors but it can be used for testing other web vulnerabilities too.
- Personal Information Management System (PIMS) [using PHP, Shell scripts]** Jan. 08 - May. 08  
 – A content management system for academicians to generate their website and curriculum vitae. Other features include storing information about publications, students, teaching, funding and research.
- Secure Data Repository GTSDS [using C, Java]** Mar. 08 - May. 08  
 – This project involved creating a platform independent distributed file storage system with support for delegating using certificates. Some key features of the service are credential checking, data encryption and storage optimization.
- User-level File Reference Monitor [using C]** Jan. 08 - Mar. 08  
 – Designed and implemented a file reference monitor to track system calls using ptrace and enforce access control checks in addition to those implemented by the OS.
- The Privacy INspector (The PIN) [using XML, JavaScript]** Sep. 07 - Dec. 07  
 – Developed a security add-on for Mozilla Firefox to prevent the client from Cross Site Scripting and Information disclosure attacks.
- GTRI Policies Project [using Sharepoint, Word documents]** Aug. 07 - Dec. 07  
 – Member of the team that formulated the info-sec policies for the Georgia Tech Research Institute (GTRI) and developed a framework based on the NIST model for their policy lifecycle.

## Skills

**Languages:** Java (Sun Certified)/J2EE, C & C++, JavaScript, PHP, Python, Bash

**Databases and Design:** MySQL , DB2 , Sybase, Oracle , MS SQL server, XML, UML

**Tools/IDEs:** L<sup>A</sup>T<sub>E</sub>X, Eclipse IDE, Visual Studio, Rational Rose, IBM Websphere/Rational App Developer

**Security Tools:** Nmap, Nessus, Wireshark, Snort, Nikto

## Extra-Curricular Activities

Volunteer and Member of GTISC (Georgia Tech Information Security Center)

Atlanta Chapter Lead (Marketing) for OWASP (Open Web Application Security Project)

Have delivered talks/workshops in areas of Web development, 2D Animation, Robotics & Linux

Have participated and won in many technical contests and cultural events during my undergrad years

## References

**Dr. Alessandro Orso**

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**Dr. Sugata Sanyal**

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