JOYDEEP MITRA

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# Summary

I am a PHD student at Kansas State University working with Dr. Venkatesh Prasad Ranganath and Dr. Torben Amtoft. My current research is on secure software development with an emphasis on mobile apps. Consequently, my research intersects the fields of Software Security, Programming Languages and Software Verification. Consequently, I am interested in all three.

# Experience

* Research Assistant at Kansas State University 2016 - Present (less than a year) Working on a methodology to design and implement secure Android apps.
* Teaching Assistant(TA) at Kansas State University August 2014 - August 2016 (2 years 1 month)   
  co-taught an undergraduate level course in C   
  TA for Graduate level course in Introduction to Information security   
  TA for under-graduate course on software testing   
  TA for under-graduate course on Logical Foundations of Programming.
* Google Summer Code participant (GSOC) 2017 – As a GSOC participant, I worked for MIT App Inventor an open source project that helps people create Android apps without having to write code.
* Programmer Analyst at Cognizant Technology Solutions July 2010 - June 2014 (4 years) I was a developer at Cognizant. I helped develop web applications for Insurance companies. My work mainly involved analyzing client requirements, developing, enhancing and deploying applications based on those requirements.
* Intern at Tata Consultancy Services June 2008 - September 2008 (4 months)

# Education

* Kansas State University (2014 – Present)  
  - PHD in Computer Science (3.875/4)
* West Bengal University of Technology, India (2006-2010)  
  - Bachelor of Technology in Information Technology (8/10)

# Awards and Acknowledgements

* Kansas State Engineering Fellowship Award by Kansas State university for pursuing a PHD in Computer Science.
* Graduate Admission Test For Engineering in Computer Science by IIT Bombay  
  - Among the top 3% of all test takers throughout the country.

# Recent Projects

* Develop CloudDB for MIT App Inventor
* An Evaluation of Android vulnerability and malicious detection tools (ongoing)
* A study of vulnerabilities in Android apps (ongoing)
* A Domain Specific Language to help design secure mobile apps (ongoing)
* An Android app for veterinarians called Bull Soundness Evaluation (as appears in Google Play)

# Skills

Android, Java, Junit, Functional Programming (SML, Racket), Prolog, SQL, Python, JavaScript, Unix, Software Engineering, Verification Tools (Alloy Analyzer, TLA+), Compiler construction.

# Conference publications

* Ghera: A Repository of Android App Vulnerabiity Benchmarks – Joydeep Mitra and Venkatesh Prasad Ranganath.. International Conference on Predictive Models and Data Analytics in Software Engineering, PROMISE 2017.

# Contact

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# References

* Dr. Venkatesh Prasad Ranganath – Asst. Professor at Kansas State University  
  - [rvprasad@ksu.edu](mailto:rvprasad@ksu.edu)
* Jefferey Schiller – Technical Architect at MIT App Inventor  
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* Dr. Torben Amtoft – Assoc. Professor at Kansas State University  
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