

Prajit Kumar Das  
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## WORK EXPERIENCE

11/1/2021 – Present Cisco Systems, Inc.  
8135 Maple Lawn Blvd.  
Fulton, MD, 20759  
Leader, Software  
Engineering

As a Security researcher and Software Engineering Leader in Cisco's Security Business Group, I lead a high-performing team of 20+ Software Developers, Technical Leads, and Product Owners, having personally hired and built two-thirds of the team. I focus on building secure, scalable, and innovative solutions for the Secure Firewall Management Center and beyond.

I drive the design and delivery of next-generation AI-powered security solutions by strategically integrating Generative AI and Large Language Models (LLMs) for intelligent firewalls and advanced management tools. Leveraging my ongoing research in "PRvL: Quantifying the Capabilities and Risks of Large Language Models for PII Redaction," I ensure robust protection of sensitive data, maintain compliance, and strengthen customer trust in Cisco products and networks.

My key responsibilities and achievements include:

- Security & Core Platform: I implement SAML SSO and OAuth2-based authentication workflows, lead enhancements in serviceability and observability for SaaS environments, and deliver containerized security solutions for MSSP customers and small-to-medium businesses.
- AI & Automation: I deploy and integrate AI agents using LLMs to streamline network security operations, build secure data pipelines for RAG models, and lead automation initiatives for quality tracking and continuous improvement.
- Compliance & Risk Management: I lead FedRamp certification, Cisco Product Security Baseline compliance, and internationalization (g11n) and accessibility efforts. I collaborate on high-impact vulnerability responses (e.g., Blast-RADIUS/CVE-2024-3596) with PSIRT and Talos teams, ensuring quick

		<p>mitigation and generating millions in contract approvals from partners.</p> <ul style="list-style-type: none"> <li>• Infrastructure &amp; Operations: I oversee device telemetry, Jenkins CI management, cloud onboarding for on-prem solutions, and data queue optimization.</li> <li>• Auditing &amp; Reporting: I drive improvements in product licensing usage auditing and user activity tracking.</li> <li>• Leadership &amp; Collaboration: I provide technical vision, strategic direction, and mentorship across multiple engineering teams, promoting innovation, compliance, and operational excellence.</li> </ul> <p>Through my leadership, I shape secure, user-centric, and future-ready systems across Cisco's security portfolio.</p>
04/27/2020 – 10/31/2021	Cisco Systems, Inc. 8135 Maple Lawn Blvd. Fulton, MD, 20759 Senior Software Engineer, Product Owner	<p>Led teams that work on Identity (MFA, SAML SSO), Access (RBAC) Management, Open Authentication (OAuth) based integration solutions for Cisco's Firepower Management Center Product series and containerization of software solutions for Cisco's products.</p> <p>Worked on product design, product delivery management, team execution of software development process, software evaluation to ensure high quality of delivered software.</p>
01/20/2019 – 04/26/2020	Cisco Systems, Inc. 8135 Maple Lawn Blvd. Fulton, MD, 20759 Software Engineer, Product Owner	<p>Led teams that work on Identity (MFA, SAML SSO) and Access (RBAC) Management solutions for Cisco's Firepower Management Center Product series.</p> <p>Worked on product design specification, product delivery management, team execution of software development process.</p>
09/18/2017 – 01/19/2018	Cisco Systems, Inc. 8135 Maple Lawn Blvd. Fulton, MD, 20759 Software Engineer	Worked on design, development and testing of product code for Cisco.
08/29/2012 – 08/22/2017	Ebiquity Research Group University of Maryland, Baltimore County, 1000 Hilltop Cir., Baltimore, MD, 21250 Research Assistant	Worked on research projects in the Mobile Access Control domains by implementing custom Android OS.
06/02/2014 – 08/22/2014	Samsung Research America 75 W. Plumeria Dr., San Jose, CA, 95134	Worked on mobile privacy projects implemented an Android app to execute custom Access Control solutions for Samsung's research division.

	PhD Intern, Advanced Applied Research Lab	
03/06/2013 – 08/30/2013	Apple Inc. 1 Infiniti Loop, Cupertino, CA, 95014	Worked on Data analysis of Siri's customer queries. Discovered categories of erroneous responses for Siri.
	PhD Summer intern in the Siri team	
06/28/2012 – 08/28/2012 & 05/31/2011 – 08/30/2011	Symantec Corp. 6750 Alexander Bell Dr., Columbia, MD, 21046	Worked on automated test framework to ensure new code does not break previous functionality.
2007 – 2010	Intern (two internships; same project)  Tata Consultancy Services Ltd. Plot C, Block EP, Salt Lake Electronics Complex, Sec - V, Bidhan Nagar, Kolkata, West Bengal, India, Pin – 700091	Worked on design and development for Oracle DB and big data projects. Worked as a team lead for team of five developers.
	Software Engineer	

## EDUCATION

Doctor of Philosophy	Computer Science	University of Maryland, Baltimore County, USA	Fall 2017
Bachelor of Engineering (with honors)	Information Technology	Jadavpur University, India	Fall 2007

**Dissertation title:** Context-Dependent Privacy and Security Management on Mobile Devices

**Advisor:** Anupam Joshi, Ph.D. **Co-advisor:** Tim Finin, Ph.D.

## PUBLICATIONS

### 2025

Leon Garza, Anantaa Kotal, Aritrai Piplai, Lavanya Elluri, Prajit Kumar Das, Aman Chadha. "Context Sensitive Access Control in Smart Home Environments." In *7th IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications*, Nov, 2025

### 2020

Sofia Dutta, Sai Sree Laya Chukkapalli, Madhura Sulgekar, Swathi Krishnaswamy, Prajit Kumar Das, and Anupam Joshi. "PRvL: Quantifying the Capabilities and Risks of Large Language Models for PII Redaction" In *6th IEEE International Conference on Big Data Security on Cloud (BigDataSecurity 2020)*. 2020.

### 2017

Prajit Kumar Das. "Context-Dependent Privacy and Security Management on Mobile Devices." *PhD thesis, University of Maryland, Baltimore County*, 2017.

Prajit Kumar Das, Anupam Joshi, and Tim Finin. "Personalizing context-aware access control on mobile platforms". InProceedings 2017 IEEE 3rd International Conference on Collaboration and Internet Computing (CIC), pages 107--116. IEEE, 2017.

Prajit Kumar Das, Anupam Joshi, and Tim Finin. "App behavioral analysis using system calls." InProceedings 2017 IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS): MobiSec 2017: Security, Privacy, and Digital Forensics of Mobile Systems and Networks, Atlanta, USA, May 2017.

## 2016

Prajit Kumar Das, Anupam Joshi, and Tim Finin. "Capturing policies for fine-grained access control on mobile devices." InProceedings 2<sup>nd</sup> IEEE International Conference on Collaboration and Internet Computing (CIC 2016), Pittsburgh, PA, USA, November 1-3, 2016, November 2016.

Prajit Kumar Das, Dibyajyoti Ghosh, Pramod Jagtap, Anupam Joshi, and Tim Finin. "Preserving User Privacy and Security in Context-Aware Mobile Platforms." InBook *Mobile Application Development, Usability, and Security*. IGI Global, 2017. 166-193.

Prajit Kumar Das, Abhay Kashyap, Gurpreet Singh, Cynthia Matuszek, Tim Finin, and Anupam Joshi. "Semantic knowledge and privacy in the physical web." InProceedings of the 4<sup>th</sup> Workshop on Society, Privacy and the Semantic Web - Policy and Technology (PrivOn 2016) co-located with the 15<sup>th</sup> International Semantic Web Conference (ISWC 2016), Kobe, Japan, October 17, 2016., volume ISWC 2016, 2016.

Sudip Mittal, Prajit Kumar Das, Varish Mulwad, Anupam Joshi, and Tim Finin. "CyberTwitter: Using twitter to generate alerts for cybersecurity threats and vulnerabilities." InProceedings International Symposium on Foundations of Open Source Intelligence and Security Informatics (FOSINT-SI 2016) co-located with the 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2016), San Francisco, CA, USA, August 19-20, 2016, 2016.

Prajit Kumar Das, Sandeep Narayanan, Nitin Kumar Sharma, Anupam Joshi, Karuna P. Joshi, and Tim Finin. "Context-sensitive policy-based security in internet of things." InProceedings 2016 IEEE International Conference on Smart Computing (SMARTCOMP 2016), St Louis, MO, USA, May 18-20, 2016, pages 1--6, 2016.

## 2015

Primal Pappachan, Roberto Yus, Prajit Kumar Das, Sharad Mehrotra, Tim Finin, and Anupam Joshi. "Mobipedia: Mobile applications linked data." InProceedings of the ISWC 2015 Posters & Demonstrations Track co-located with the 14<sup>th</sup> International Semantic Web Conference (ISWC-2015), Bethlehem, PA, USA, October 11, 2015., volume 1486, pages 2--5. CEUR Workshop Proceedings (CEUR-WS.org), 2015.

Primal Pappachan, Roberto Yus, Prajit Kumar Das, Sharad Mehrotra, Tim Finin, and Anupam Joshi. "Building a mobile applications knowledge base for the linked data cloud." InProceedings of the 1<sup>st</sup> International Workshop on Mobile Deployment of Semantic Technologies (MoDeST 2015) co-located with 14<sup>th</sup> International Semantic Web Conference (ISWC 2015), Bethlehem, Pennsylvania, USA, October 11th, 2015., volume 1486, pages 14--25. CEUR Workshop Proceedings (CEUR-WS.org), 2015.

## 2014

Primal Pappachan, Roberto Yus, Prajit Kumar Das, Tim Finin, Eduardo Mena, and Anupam Joshi. "A semantic context-aware privacy model for FaceBlock." InProceedings of the 2<sup>nd</sup> Workshop on Society, Privacy and the Semantic Web - Policy and Technology (PrivOn 2014) co-located with the 13<sup>th</sup> International Semantic Web Conference (ISWC 2014), Trento, Italy, October 20, 2014., volume 1316, pages 64--72. CEUR Workshop Proceedings (CEUR-WS.org), 2014.

Roberto Yus, Primal Pappachan, Prajit Kumar Das, Tim Finin, Anupam Joshi, and Eduardo Mena. "Semantics for privacy and shared context." InProceedings of the *2<sup>nd</sup> Workshop on Society, Privacy and the Semantic Web - Policy and Technology (PrivOn 2014) co-located with the 13<sup>th</sup> International Semantic Web Conference (ISWC 2014)*, Trento, Italy, October 20, 2014., volume 1316. CEUR Workshop Proceedings (CEUR-WS.org), 2014.

Roberto Yus, Primal Pappachan, Prajit Kumar Das, Eduardo Mena, Anupam Joshi, and Tim Finin. "Demo: FaceBlock: privacy-aware pictures for Google Glass." InProceedings of the *12<sup>th</sup> Annual International Conference on Mobile Systems, Applications, and Services, MobiSys'14*, Bretton Woods, NH, USA, June 16-19, 2014, page 366, 2014.

## 2013

Prajit Kumar Das, Anupam Joshi, and Tim Finin. "Energy efficient sensing for managing context and privacy on smartphones." InProceedings of the *1<sup>st</sup> Workshop on Society, Privacy and the Semantic Web - Policy and Technology (PrivOn 2013) co-located with the 12<sup>th</sup> International Semantic Web Conference (ISWC 2013)*, Sydney, Australia, October 22, 2013., volume 1121. CEUR Workshop Proceedings (CEUR-WS.org), 2013.

Prajit Kumar Das, Dibyajyoti Ghosh, Anupam Joshi, and Tim Finin. "ACM HotMobile 2013 poster: An energy efficient semantic context model for managing privacy on smartphones." *Mobile Computing and Communications Review*, 17(3):34--35, 2013.

## TALKS

- 2017 Paper presented "App behavioral analysis using system calls." At the 2017 IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS): MobiSec 2017: Security, Privacy, and Digital Forensics of Mobile Systems and Networks, May 1, 2017
- 2016 Paper presented "Capturing policies for fine-grained access control on mobile devices." At the 2<sup>nd</sup> IEEE International Conference on Collaboration and Internet Computing (CIC 2016), Nov 1 – 3, 2016
- 2016 Paper presented "Semantic knowledge and privacy in the physical web." At the 4<sup>th</sup> Workshop on Society, Privacy and the Semantic Web - Policy and Technology (PrivOn 2016) co-located with the 15<sup>th</sup> International Semantic Web Conference (ISWC 2016), Oct 17 – 21
- 2016 Paper presented "Context-sensitive policy-based security in internet of things." At the 2016 IEEE International Conference on Smart Computing (SMARTCOMP 2016), May 18 – 20
- 2016 Short 3-minute talk "Energy Efficient, Context-Dependent Privacy and Security Management on Mobile Devices" At the 38<sup>th</sup> Annual UMBC Graduate Research Conference 2016, Mar 23
- 2015 Poster presented "Mobipedia: Mobile applications linked data." At the 14<sup>th</sup> International Semantic Web Conference (ISWC 2015), Oct 11 – 15
- 2015 Research presented "Is your personal data at risk? App analytics to the rescue." At the UMBC Cyber Defense Lab Meeting, Oct 23
- 2013 Poster presented "An energy efficient semantic context model for managing privacy on smartphones." At the 14<sup>th</sup> International workshop on Mobile Computing Systems and Applications (HotMobile 2013), Feb 26 – 27

## TEACHING EXPERIENCE

Guest Lecturer for Wireless Mobile Systems Security (Undergrad)	Spring 2016
Part-time TA for Wireless Mobile Systems Security (Undergrad)	Spring 2016
Guest Lecturer for Semantic Web (Grad)	Spring 2016
TA for Software Engineering (Grad)	Spring 2012
TA for Data Structures (Undergrad)	Fall 2010 - Spring 2012

## RESEARCH EXPERIENCE

- 2016 ***Mithril*** Access Control (PhD dissertation project): Developed a framework for capturing user access control policies that are fine-grained, context-sensitive and are represented using Semantic Web technologies and thereby managing access control decisions for user data on mobile devices. Funded by NSF grants 0910838, 1228198 and MURI award FA9550-08-1-0265 from the Air Force Office of Scientific Research.
- 2016 ***Carlton*** (Google Physical Web project): Developed a Google Physical Web based context-aware privacy-managed question-answering system. Funded by Google gift.
- 2015 ***Heimdall*** (second part of PhD dissertation): Developed a Machine Learning classifier to determine if a mobile application's behavior at the operating system level, was potentially malicious versus benign.
- 2015 ***Mobipedia*** (A Mobile Applications Knowledge Base): Built a Linked data cloud containing knowledge of mobile application data, and developer meta-data, permissions used (in android), similar apps etc. Funded by NSF grants 0910838, 1228198.
- 2014 ***FaceBlock*** (Privacy-Aware Pictures): Built a proof of concept system capable of taking Privacy-Aware Pictures while using Google Glass. Funded by NSF grants 0910838 and MURI award FA9550-08-1-0265 from the Air Force Office of Scientific Research.
- 2014 Samsung Research America, Mobile privacy research internship: Created a privacy control app that protected users' data privacy. Focused on system level content providers and redirected app data requests, like requests made to *ContactsProvider* and responded with obfuscated or faked data.
- 2013 Apple Inc., Data analytics research internship in the Siri team: Identified areas of accuracy improvement for Siri. Carried out data analysis on user queries and Siri responses.

## SERVICE TO PROFESSION

- 2025 Program Committee member Workshop on Exploring Security, Trust, Ethics, And Data-centric issues in Autonomous Robotics SYstem (STEADY)
- 2025 Reviewer Transactions on Dependable and Secure Computing
- 2025 Reviewer Social Network Analysis and Mining
- 2017 Program Committee member & reviewer for Industrial Knowledge Graphs co-located with the 9th International ACM Web Science Conference 2017
- 2016 Reviewer for CHI 2017
- 2016 Reviewer IEEE Transactions on Services Computing 2016

- 2016 Sub-reviewer for WWW 2016
- 2014 Program Committee member & additional reviewer for Emerging Applications of Info. Tech. (EAIT) 2014
- 2012 Sub-reviewer for IEEE VTC 2012-Fall

## EXTRACURRICULAR UNIVERSITY SERVICE

- 2014 UMBC ACM Student Chapter Chair (2013-2014) responsible for organizing Tech. Talks by visitors to the university and other department social activities like “Hi-Tea Competition.”
- 2013 UMBC ACM Student Chapter Treasurer (2012-2013) maintained budget for the chapter.
- 2013 Co-organizer / graduate student coordinator of hackUMBC (2013), the first hackathon at UMBC.

## MEDIA COVERAGE

FaceBlock was mentioned in Nature Article: “What could derail the wearables revolution?” by Kat Austen as a potential solution created for handling privacy issues in the data-drenched world of Wearable Computing.

## AWARDS

Awarded the NSF Student Travel Award of 2270 USD for presenting paper at the PrivOn workshop in the 15th International Semantic Web Conference (ISWC), 2016.

Awarded the NSF Student Travel Award for presenting paper at the SmartSys workshop in the 2nd IEEE International Conference on Smart Computing (SMARTCOMP), 2016.

Awarded the NSF Student Travel Award of 1427 USD for presenting paper at the MoDeST workshop in the 14th International Semantic Web Conference (ISWC), 2015.

Awarded the NSF Student Travel Award of 2200 USD for presenting paper at the PrivOn workshop in the 13th International Semantic Web Conference (ISWC), 2014.

## TECHNICAL SKILLS

Platforms	Android, Linux, Python-Selenium based automation platform
Languages	Java, Python, Go, Bash
Tools and Stacks	IntelliJ Suite, LAMP, Git, Scikit-learn, BeautifulSoup, Plotly, Weka, Perforce, LaTeX
Back-end	MySQL, Oracle, NoSQL, MongoDB
Front-end	PHP, Bootstrap, HTML5, JavaScript, CSS, React
Domain knowledge	Identity & Access Management, Multi-Factor Authentication, Security Assertion Markup Language – Single Sign-On, Role-Based Access Control, Open Authentication, Cybersecurity, Semantic Web, Machine Learning, Mobile Computing, Mobile Security & Privacy, Enterprise Networking Software, Containerization of Software Solutions

## **TEACHING AREAS**

Specialization	Mobile Computing, Computer Security and Privacy, Identity & Access Management
Core graduate	Operating Systems, Computer Networks, Database Management Systems
Core Undergrad	Java, Data Structures, Discrete Structures, Principles of Programming Languages

## **LANGUAGES**

English	Fluent in all forms of communication
Bengali	Native language, fluent in all forms of communication
Hindi	Fluent in all forms of communication

**\*\*References available upon request\*\***