

Modul PSI-ProjectSP-M Project Security and Privacy <i>Project Security and Privacy</i>		9 ECTS / 270 h
(seit SS18) Modulverantwortliche/r: Prof. Dr. Dominik Herrmann		
Inhalte: In this project participants work independently on problems related to current research activities of the Privacy and Security in Information Systems Group. Instructors will provide guidance and supervision.		
Lernziele/Kompetenzen: Successful students will be able to independently work on research problems in security and privacy. They will also be able to implement tools and/or analyze data in order to answer a research question. Finally, they will be able to present their work in a talk and document their approach and results in a written report.		
Sonstige Informationen: This project is taught in English unless all participants are fluent in German. The workload of this project is equivalent to 270 hours. Workload breakdown: <ul style="list-style-type: none"> • 60 hrs: Getting familiar with the problem and preliminaries: reading related work, and understanding potentially existing source code • 20 hrs: Preparing the talk (including time for attendance of other talks) • 110 hrs: Implementing tools and/or analyzing data • 80 hrs: Writing final report with approach and methods 		
Zulassungsvoraussetzung für die Belegung des Moduls: keine		
Empfohlene Vorkenntnisse: Participants should have advanced knowledge and practical skills in information security and privacy, which can be acquired, for instance, in the module PSI-IntroSP-B and a security-related seminar or project. Depending on the actual topic participants may be expected to be familiar with commonly used security terminology, common types of malware and attacks, buffer overflows and related attacks, cryptography, network security, web security, and concepts of privacy. Moreover, participants should have practical experience with at least one scripting or programming language such as Python or Java. Alternatively, participants should have strong skills in empirical data collection and data analytics (statistics and/or machine learning). Experience with Linux environments, web technologies, and network protocols is recommended.		Besondere Bestehensvoraussetzungen: keine
Angebotshäufigkeit: WS, SS	Empfohlenes Fachsemester:	Minimale Dauer des Moduls: 1 Semester
Lehrveranstaltungen		
Project Security and Privacy Lehrformen: Übung		6,00 SWS

<p>Sprache: Englisch/Deutsch Angebotshäufigkeit: WS, SS</p> <hr/> <p>Lernziele: cf. module description</p> <hr/> <p>Inhalte: Potential topics include</p> <ul style="list-style-type: none">• empirical studies, either manually (surveying security properties of systems) or automatically (e.g., web crawls),• creating scanning tools and platforms where results can be published in a meaningful way (e.g., PrivacyScore.org),• analyzing data sets for aspects of security and privacy, and• implementing cryptographic or anonymization techniques in a secure fashion, e.g., for encrypted storage in cloud services. <hr/> <p>Literatur: Literature will be announced at the beginning of the project.</p>	
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<p>Prüfung Hausarbeit mit Kolloquium / Prüfungsdauer: 30 Minuten Bearbeitungsfrist: 3 Monate Zulassungsvoraussetzung zur Modulprüfung: Regular attendance at project meetings. zentral organisiert: nein Beschreibung: The module examination consists of two parts: Firstly, the participants submit a written report (in English) that includes the source code, datasets, and analysis scripts. Secondly, the participants give a talk in which they defend their work (in English; in German if all participants are fluent in German) by presenting related work, their approach, and results. The maximum number of points that can be achieved in the module examination is 100. Optionally, participants can submit intermediary results (in English) to collect up to 20 bonus points. If the module examination is passed on its own (generally, this is the case when at least 50 points are obtained), the bonus points will be added to the points achieved in the module examination. The grade 1.0 can be achieved without the bonus points. Details regarding the number of optional submissions during the semester, their type, the points per submission, and the respective deadlines will be announced in the first session of the project.</p>	
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