Spring 2018 CS755 Advanced Computer Networks

Internet of Things

Lecture: Art and Design Building L008, Fridays 1:30 - 4:10 pm

Instructor: Song Min Kim (song@gmu.edu), Office hour: TBD

Course web page: All class materials in blackboard https://mymasonportal.gmu.edu/

Course summary and objectives
Internet of Things (IoT) collectively refers to devices, technologies, and services that improves the quality of our lives via pervasively connected everyday objects. While the focus of the course is in networking technologies, we will cover a wide range of IoT systems; Tentative topics include (i) RFID systems, (ii) wearables, (iii) low-power wide area networks, (iv) smart health, and (v) smart cities. We will also have hands-on experience on real platforms like RFID readers and Arduino-based wireless systems. This course aims at:

- Acquiring basic knowledge on IoT networking
- Learning state-of-the-art IoT research trends in latest papers and insight on top-quality research
- In-depth understanding of the topic of interest via reading and real-world implementation

Note: This course satisfies the breadth requirement of “Systems and Networks” for CS MS

Prerequisites
CS555 (Computer Communications and Networking) and programming proficiency (C or Java) are required. Prerequisites may be waived upon demonstrating sufficient background approved by the instructor.

Textbook
No textbook. We will discuss the latest research publications in premier venues.

Grading policies
The scale may be lowered or raised as needed, mostly to assign appropriate letter grades for students in borderlines, or to adjust for overly difficult or easy assignments.

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<th>Component</th>
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<td>Paper critiques</td>
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<td>Class participation</td>
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<td>Paper presentation</td>
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<td>Self-directed project</td>
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Course load
No exam. Weekly paper critiques, two paper presentations, and a final (group) project. The project is self-driven, where you implement state-of-the-art IoT design of your choice. Specifics TBA.

Honor code
All students must adhere to the Honor Codes of GU and the Department of Computer Science. Violation will result in a failing grade.

Disability statement
If you have a disability or other condition affects that may affect your academic performance, please document it with the Office of Disability Services and let the instructor know in the first week of the semester to accommodate needs.