Seminar on Storage Systems: Storage Giants

Many of today’s computing services have shifted to cloud-based infrastructure, forcing companies that offer them to focus extensive research effort on developing storage architectures that can meet their applications’ performance and scalability goals.

In this seminar, we will review academic papers in top-tier venues that originated from some of these companies, such as Amazon, Google, Facebook, and Microsoft, and changed the storage landscape. Topics will include caching, failure recovery, datacenter organization, and distributed files systems, databases, and messaging services. Our goal will be to understand each company’s motivation for its unique architecture, how the design is specially tailored for its own use cases, and the impact that it made.

The list of papers will be published shortly before the beginning of the semester.

The course will combine lectures by the instructor with independent reading in a seminar format. The students will read important papers in the field and will present them in class along with their background and follow-up work or adoption. Students will be expected to familiarize themselves with the each week’s paper prior to class.

Please email your name and ID to Gala Yadgar. Please state whether you are a graduate or undergraduate student (which semester), grades average, related courses you took, and other relevant information.