

# AC215 FALL 2024 SCHEDULE

Week	Date	Session	Lecture
1	9/3	1	Introduction
	9/5	2	Virtual Enviroments and Virtual Machines
2	9/10	3	Containers I
	9/12	4	Containers II
3	9/17	5	Data Pipelines/ Data Management: Extract, Transform, Load (ETL) and Data Version
	9/19	6	TF Data, TF Records, PyTorch Dataset, DataLoader, Cloud Storage
4	9/24	7	LLM tools and agents: RAG I
	9/26	8	LLM tools and agents: RAG II
5	10/1	9	LLM fine tuning and LORA - I
	10/3	10	LLM fine tuning and LORA - II
6	10/8		PROJECT WEEK
	10/10		
7	10/15	11	Model Optimization: Distillation, Compression
	10/17	12	Advanced training workflows: experiment tracking (W&B), multi GPU, serverless training (Vertex AI)
8	10/22	13	Serverless Deployment: Cloud Functions, Cloud Run
	10/24	14	Modal Labs Guest Lecture Zoom
9	10/29	15	ML Workflows with Vertex AI
	10/31		Midterm
10	11/5	16	Automating Software Development: CI/CD with GitHub Actions and other tools [IB]
	11/7	17	App design, setup and code organization (SJ)
11	11/12	18	APIs & Frontend (SJ) (Frontend - React (SJ) Optional Extra to be Scheduled)
	11/14	19	Deployment: Ansible
12	11/19	20	Scaling: Kubernetes
	11/21	21	Final deployment and review
13	11/26		THANKS GIVING WEEK
	11/28		
14	12/3		PROJECT TIME
	12/9		Project Showcase
	12/11		DELIVERABLES DEADLINE