

	Monday	Wednesday	Friday
Week 1			01/21/22 Class overview, survey, types of data analysis (predictive, descriptive, ...)
	01/24/22	01/26/22	01/28/22
Week 2	Examples of predictive data analysis	Examples of predictive data analysis (continued) HW 1 out	* Discuss final project expectations * Intro to scipy
	01/31/22	02/02/22	02/04/22
Week 3	Supervised vs. unsupervised learning, clustering with examples in scipy	Scipy: clustering, linear regression HW 1 due, HW 2 out	Scipy: linear regression
	02/07/22	02/09/22	02/11/22
Week 4	Evaluating performance of machine learning algorithms	Mean-squared error and other loss functions HW 2 due, HW 3 out	ML topics: * overfitting vs. underfitting * bias vs. variance
	02/14/22	02/16/22	02/18/22
Week 5	Continuation: * improving predictions * navigating bias vs. variance tradeoff	* Cross-validation * evaluating model performance HW 3 due, HW 4 out	* Model selection * Hyperparameter tuning
	TUESDAY: 02/22/22	02/23/22	02/25/22
Week 6		Various features of programming languages * compiled/interpreted * garbage collection/manual memory management * type checking: run time / compile time	
	Software documentation, auto-generation	HW 4 due, HW 5 out	Rust: compilation, simple examples
	02/28/22	03/02/22	03/04/22
Week 7	MIDTERM	Rust: simple examples continued, simple types, type inference HW 5 due, HW 6 out	Rust: flow control
		SPRING BREAK	
	03/14/22	03/16/22	03/18/22
Week 8		* CS: heap vs stack * CS: manual memory management * Rust: ownership & references	* Rust: collections * Discuss implementation cost Final project proposal due
	Rust: functions, generic types	HW 6 due, HW 7 out	
	03/21/22	03/23/22	03/25/22
Week 9			* Linked lists * Queue vs stack * Rust: pointers and implementation of lists
	Rust: enums and pattern matching	Rust: struct and methods HW 7 due, HW 8 out	
	03/28/22	03/30/22	04/01/22
Week 10	* CS: typical ways of representing graphs (sparse and dense) * implementation in Rust	* graph exploration: BFS/DFS HW 8 due, HW 9 out	Rust: packages, modules, crates
	04/04/22	04/06/22	04/08/22
Week 11		Rust: traits HW 9 due, HW 10 out	Rust: references / lifetimes
	Rust: error handling	04/13/22	04/15/22
Week 12		* CS: (balanced) binary search trees * (unbalanced) implementation in Rust	* CS: BSTs vs. hash tables * applications of BSTs: range searching, predecessor/successor search
	* CS: priority queues	HW 10 due, HW 11 out	04/22/22
Week 13		04/20/2022 (Mon schedule) Rust: Multithreading HW 11 due, HW 12 out	Rust: multithreading (continued)
	04/25/22	04/27/22	04/29/22
Week 14	* Algorithm design: greedy algorithms	* Algorithm design: dynamic algorithms HW 12 due	Rust: closures
	05/02/22	05/04/22	
Week 15	Calling Rust from Python Final project report due	Compiling Rust to WebAssembly	

FINAL EXAM TO BE SCHEDULED