

Fellowship Program Syllabus



Week 1

- Logistics / What to Expect
- Intro to Command Line
- Conditionals and Looping
- Git / Github
- Functions
- Lists, Tuples, and Sets
- Computer Memory

Week 2

- Dictionaries
- More Command Line / Shell
- Algorithm: Markov Chains
- Twitter API
- Classes / Object Orientation

Week 3

- HTML
- CSS
- Javascript
- Document Object Model
- jQuery
- Introduction to Flask

Week 4

- More Flask
- Cookies and Sessions
- AJAX & JSON
- Relational Databases / SQL

Week 5

- SQLAlchemy
- Data Modeling
- Machine Learning
- Project Planning

Weeks 6 – 9

- Individual Projects
- Project Technologies
- Development Methodologies
- Advanced Git: Branching & Merging
- Runtime complexity: $O(n)$
- Recursion
- Linked Lists
- Trees and Binary Trees
- Sorting Algorithms

Week 10

- Polishing Individual Projects
- Career Day
- Career Planning
- Introduction to Whiteboarding
- Understanding Technical Interviews

Weeks 11 – 12 (*optional*)

- Self-directed Study
- Algorithm Practice
- Group Whiteboarding
- Resume Reviews
- Career Search Support

Fellowship Weekday Schedule

Weeks 1 – 5: Intensive Lectures / Labs

10:00 am	Morning Lecture
11:15 am	Lab Exercises / Pair Programming
1:00 pm	Lunch
2:00 pm	Afternoon Lecture
3:15 pm	Lab Exercises / Pair Programming
4:30 pm	One-on-One Advisor Meetings
6:00 pm	Day Ends

Weeks 6 – 10: Projects / Afternoon Lectures

10:00 am	Lightning Talks and Standup Meetings
10:30 am	Independent Project Work
1:00 pm	Lunch
2:00 pm	Afternoon Lecture
3:00 pm	Independent Project Work
4:30 pm	One-on-One Advisor Meetings
6:00 pm	Day Ends

Weeks 11 – 12: Self-Directed Whiteboarding/Career Preparation

10:00 am	Independent or Group Study Career Services Support
6:00 pm	Day Ends