Pathways After CS102
CS102 and Beyond

Which classes should you take next?

- Data Tools
- Foundations
- Expanding on CS102 Topics
  - Data Analysis
  - Data Visualization
  - Machine Learning
  - Data Mining
  - Network Analysis
Data Tools

- **CME 192**: Introduction to MATLAB
- **CME 193**: Introduction to Scientific Python
- **CME 195 (STATS 195)**: Introduction to R
- **CS 41**: The Python Programming Language
Foundations

- Programming
  - CS 106B (ENGR 70B): Programming Abstractions

- Linear Algebra
  - MATH 51: Linear Algebra, Multivariable Calculus, and Modern Applications
  - CME 103 (EE 103): Introduction to Matrix Methods

- Probability and Statistics
  - MS&E 120: Probabilistic Analysis
  - CS 109: Introduction to Probability for Computer Scientists
  - STATS 116: Theory of Probability
Expanding on CS102 Topics
Data Analysis & Visualization

- **Data Analysis**
  - STATS 101: Data Science 101
  - MS&E 125: Introduction to Applied Statistics
  - MS&E 226: "Small" Data: Prediction, Inference, Causality

- **Data Visualization**
  - CME 151A: Interactive Data Visualization in D3
  - ARTSTUDI 168: Data as Material
Machine Learning & Data Mining

- **Machine Learning** (prereqs: linear algebra, probability)
  - EE 104: Introduction to Machine Learning
  - CS 221: Artificial Intelligence - Principles and Techniques
  - CS 229A: Applied Machine Learning
  - CS 230: Deep Learning

- **Data Mining** (prereqs: linear algebra, probability)
  - STATS 202: Data Mining and Analysis
  - CS 246: Mining Massive Data Sets
  - CS 276 (LINGUIST 286): Information Retrieval and Web Search
Network Analysis

- MS&E 135: Networks
- MS&E 235: Network Analytics
- MS&E 237 (CME 237): Networks, Markets, and Crowds
- CS 224W: Analysis of Networks
Questions?