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# Pathways After CS102

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# 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
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# 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
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# 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
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# Expanding on CS102 Topics

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# 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
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# 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
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# 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**
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**Questions?**

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