



# Recommended Learner Journey: Computer Science

Follow this learner journey if you are skilled in computer science.

## 1. Complete the computer science **pathway** to earn admission to the degree.

### Data Science Foundations: Data Structures & Algorithms (3 credits)

Algorithms for Searching, Sorting & Indexing  
Trees & Graphs: Basics  
Dynamic Programming, Greedy Algorithms

## 2. Complete your **vital skills for data scientists** courses.

### Vital Skills for Data Scientists (4 credits)

Data Science as a Field  
Cybersecurity for Data Science  
Ethical Issues in Data Science  
Visualization Fundamentals

## 3. Complete **core & elective** courses in any order.

### Data Science Foundations: Statistical Inference (3 credits)

Probability Theory: Applications for Data Science  
Statistical Inference for Estimation in Data Science  
Statistical Inference & Hypothesis Testing  
in Data Science Applications

### Data Mining Foundations & Practice (3 credits)

Data Mining Pipeline  
Data Mining Methods  
Data Mining Projects

### Statistical Modeling for Data Science (3 credits)

Modern Regression Analysis in R  
ANOVA Experimental Design  
Generalized Linear Models & Nonparametric  
Regression

### Machine Learning (3 credits)

Introduction to Machine Learning: Supervised Learning  
Unsupervised Algorithms in Machine Learning  
Introduction to Deep Learning

### Big Data Architecture (2 credits)

Fundamentals of Big Data Architecture  
Big Data Architecture in Production

### Elective Courses (9 credits)

See **Curriculum** page for details. More electives  
coming soon.