

# Nazim Madhavji

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## I live here .....

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## Courses

- CS 9549b: Software Architectures
- CS 9864b: Software Engineering for Big Data Applications and Analytics
- Coordinate Undergraduate courses:
  - Internship, Capstone, Theses, Inter-university, Mainframe.
- CS 9863b: Empirical Research Methods
- CS 9551a: Requirements Engineering

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## Learning Objectives -CS9549b

## (Software Architectures)

- Different types of software architectures
- Quality attributes, tactics, tradeoffs, sensitive points, risks
- Architectural design approaches
- Evaluation of architectures
- Group work Architectural project on a cloud
- Micro-services and architecture

### Learning Objectives – cs9864b (SE for Big Data Applications and Analytics)

- Domain of Big Data and Data Analytics
- Emerging work on SE and Big Data (research papers)
- Focus:
  - Mainly: SE for Big Data applications
  - Little: Big Data for SE (a.k.a "Software Analytics")
- Project (2017): Create Big Data application on a cloud using micro-services:
  - Stock market
  - Climate events
  - etc.

#### **Research Focus**

- Requirements Engineering (RE)
- RE for Big Data applications
- Cloud infrastructures
- Software/System Architectures
- Complex Defects
- Compliance issues in Development

## **Example Research Topics**

- Big Data in RE & Corp. decision-making
- Requirements Analytics in large projects
- Cloud architecture simplicity
- Micro-services: monitoring, extensibility & customisability
- Compliance issues in RE
- Requirements specification (SRS) validation
- Multiple Component Defects (MCDs)
- Faulty component detection

## OK, let's get cracking!

#### And don't fear the Unknown!

