

# Welcome to C106A: Introduction to Robotics

Discussion 0

# Content Team

Prof. Sreenath



Prof. Sastry



Zoltan



Sunay



Max



Tarun



More  
reader(s)?

# Your Turn!

- Introduce yourself to people in your group (name, major, favorite scent)
- Come up with three (nontrivial) things you all have in common
- Pick one representative to introduce your group and what you all had in common

# Discussion Logistics

- Three regular discussions per week
  - Thursday 2-3pm (Zoom)
  - Friday 2-3pm (Cory 521)
  - Friday 3-4pm (Cory 521)
- All regular discussions cover the same material and will be taught by the same person (Tarun or Sunay, alternating week by week)
- One LOST discussion per week (taught by Max)
  - Wednesday 5-7pm, room TBD
  - Lags a week behind lecture content
  - Not a review session

# Discussion Logistics

## Regular Discussion

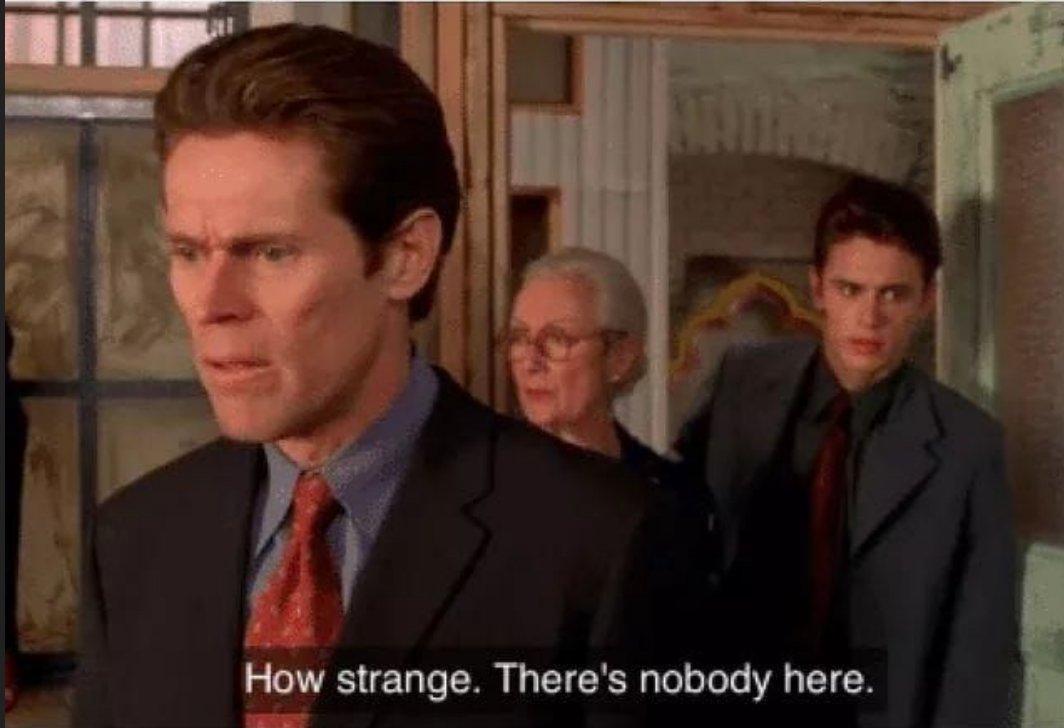
- In time with content covered in same week's lecture
- Covers content from a worksheet
- One Zoom/recorded section
- 1 hour
- Tarun, Sunay

## LOST Section

- Lags a week behind lecture
- Student-driven coverage of content
- One in-person section
- 2 hours
- Max
- **NOT** a review session

# Linear Algebra Review

Me entering in a room full of linear algebra haters



How strange. There's nobody here.

# Linear Algebra Review

- Hopefully you remember:
  - Matrices, vectors
    - Basic operations (add, multiply, transpose)
    - Dot product, cross product
  - Identity and zero matrices
  - Linear functions
  - Single variable calculus
  - Some geometry and spatial reasoning

# Linear Algebra Review

- Things you may need to review:
  - Invertibility
  - Determinants
  - Matrix exponential
  - Subspaces
  - The four fundamental subspaces
  - Linear independence, span
  - Basis
  - Abstract vector spaces
  - Eigenstuff
  - Euclidean norm
  - Projections
  - Taylor series
  - SVD
  - Basic mechanics



# Review Resources

- 3B1B “Essence of Linear Algebra”
- 106A Math Review
- Axler’s “Linear Algebra Done Right”
- Paul’s Calculus Notes
- HW 0
- Max’s Linux and Python workshops! (Saturday 1pm - 1:45pm, 2pm - 2:45pm Cory 105)
- Your peers
- The content staff

# Discussion Etiquette

- Learning is a process
- Be patient with your peers!
- Growth mindset
- If someone or something is not contributing to a positive learning environment, please let staff know! (Email or private Ed post)

Good Luck! We're rooting for you ❤️

