RESEARCH EXPERIENCE FOR UNDERGRADUATES

-Shefali Umrania
WHY RESEARCH?

1. Gives a practical dimension to your education
2. Helps you be more analytical
3. Thought experiments
4. Pathway to future plans
PRACTICAL EDUCATION

- Apply principles learnt in theory class
- Results actually matter
- No syllabus to rely on
- Wealth of literature for discussion
ANALYTICAL SKILLS

• Helps visualize complex principles
• Ability to think outside the box
• Qualitative evaluation of work
• Creative problem solving skills
THOUGHT EXPERIMENTS

• Design your own experiments
• Early exposure to cutting edge research
• Test your own experiments
• Bask in your own publications
PATHWAY TO FUTURE PLANS

Research?

OR

Industry?

Marriage vs. The Ph.D.

**Typical Length:**
- Marriage: 7.5 years
- Ph.D.: 7 years

**Begins with:**
- Marriage: A proposal
- Ph.D.: A thesis proposal

**Culminates in a ceremony where you walk down an aisle dressed in a gown:**

- Marriage: ✔
- Ph.D.: ✔

**Usually entered into by:**
- Marriage: Foolish young people in love
- Ph.D: Foolish young people without a job

**50% end in:**
- Marriage: Bitter divorce
- Ph.D.: Bitter remorse

**Involves exchange of:**
- Marriage: Vows
- Ph.D.: Know-how

**Until death do you part?**
- Marriage: If you’re lucky
- Ph.D.: If you’re lazy

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YOUR OPTIONS?

- Ask professors
- researchweb.iit.edu
- Apply for R&D internships in companies
- Apply to REU programs in different universities
- Ask seniors involved in research for help
CHECKLIST

✓ Good Academics
✓ Recommendation Letters
✓ Cover Letter
✓ Resume
• Visit professors in their office hours
• Write a cover letter to express intent
• Request courteously
• Show interest in their work
REMEMBER...

- Deadlines for summer internships are Dec/Jan
- Study the research projects before applying
- Express how you can supplement their work
- Be confident!
THANK YOU!

- Questions?