REU-CAAR:
You're Here!

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Laxman: Why are you telling them all that?
Bill: In academia its very important to credit past work!

Purpose of This Talk

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1. Who are the mentors?

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4. What should you expect of us?
5. Nuts and bolts of how the program works.
6. Advice on how to get the most out of this summer!

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Applying Theory to Practice.

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CAAR: Combinatorics, **A**lgorithms, and **AI** for **R**eal Problems.

REU-CAAR PROJECTS ON ALGORITHMS

I-O Efficient Parallel Algs in Theory and Practice

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ERIN: Yes!

BILL: Whats that like?
I mean, what is **wanting to help people** like?

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Fun Fact Bill R took a reading course from Bill G on this material when Bill R was a grad student in 1993

REU-CAAR PROJECTS ON AI and ML

ML for Auto Driving: Theory and Practice

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Fun Fact Usually Arnav is **1st** alphabetically, but now he's **3rd**

Making a Multimedia Quiz Show that Stumps AI

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Sarah is mentoring in REU-CAAR for the first time!

El Pitch We train NN to do puzzles and games.
We extend to proof verification (Lean) or Quantum Mechanics.
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Fun Fact The number of students on this project has changed so much that I had to use the uncertainly principle to make up this slides.

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Fun Fact ComplexityBlog with Bill and Lance has 50,000 readers

REU-CAAR STAFF and HISTORY

Admin

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Help with Final Presentations: Clyde.

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4. **Connection:** Help connect you to their colleagues, graduate assistants, others.

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Issues that Probably Won't Arise But Need to be Discussed

Sexual Harassment and Discrimination

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   Note that in the United State there is Mandatory Reporting: if a mentor or director hears about a case of sexual harassment, they must report it.
2. While this slide is about Sexual Harassment and Discrimination, feel free to talk to **Bill**, **Laxman**, or **Erin** about **any** issue, even if it is uncomfortable.

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SPACE AGE and **CAMERA**

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Upshot Communication!

Schedule and Activities

First Week++ Talks

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In symbols

$$(\forall p)(\exists m, d)[MENTOR(p, m) \wedge TALK(p, m, d)].$$

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4. Bill will join you for lunch some of the first week.

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2. Wed 3:00-4:00. Sarah's talks about her project.

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9. Some of these items may change (e.g., lunches, talks may be a diff day).

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Check: There are websites that have metro information- check them before any excursion.

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Summary of Projects and People

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Irwin Winkler

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Why am I telling you this?

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Show me the Money!

Where Does the Winkler Money Go?

Things the NSF won't pay for:

Show me the Money!

Where Does the Winkler Money Go?

Things the NSF won't pay for:

- Money for housing for non-citizens.

Show me the Money!

Where Does the Winkler Money Go?

Things the NSF won't pay for:

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- The REU Lunches.

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Things the NSF won't pay for:

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- Misc.

Does Where You Got Your Funding Matter? NO

1. Some of you are NSF funded.
2. Some of you are Iribe funded.
3. Some of you are Anduril/ Apon funded
4. Some of you are funded by your own school/Winkler/UMCP.
5. Some of you are not funded.

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None of this will matter except:

1. Anduril/Apon students will write letters of thanks.
2. Unpaid students: less forms to fill out.
3. Non-citizens can't get ID cards.

My Wife Says that if I Lie to You I Must Tell You

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Donald Trump's Senior Thesis **was not** on

I/O Efficient Parallel Algorithms

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Alt NN for Games, Puzzles, & the Phy. World

Questions from You?

I welcome questions now and anytime!