The Sentinel: November 1, 2021
News and events happening in the <u>Computer Science Department</u>

CS Tea Talk:

Join us every Thursday 4:00-5:00 in Olin 306 to hear from compelling speakers and to have fun with other people interested in CS.

(Note: Masking is required at CS Tea events, as these events are open to off-campus visitors.)

- **Thursday, Nov. 4, 4:00-5:00pm, Weitz Cinema: <u>How Data Killed Facts</u> by Jill Lepore, Harvard.** Part of the Humanities and Technology Series, History Lefler Lectures and CS Tea Talks.

- **Thursday, Nov. 11, 4:00-5:00pm, Olin 306: <u>Differentially Private Simple Linear Regression</u>** with Daniel Alabi '14 (Harvard CS) Economics and social science research often require analyzing datasets of sensitive personal information at fine granularity, with models fit to small subsets of the data. Unfortunately, such fine-grained analysis can easily reveal sensitive individual information. We study algorithms for simple linear regression that satisfy differential privacy, a constraint which guarantees that an algorithm's output reveals little about any individual input data record, even to an attacker with arbitrary side information about the dataset. We consider the design of differentially private algorithms for simple linear regression for small datasets, with tens to hundreds of datapoints, which is a particularly challenging regime for differential privacy. Focusing on a particular application to small-area analysis in economics research, we study the performance of a spectrum of algorithms we adapt to the setting. We identify key factors that affect their performance, showing through a range of experiments that algorithms based on robust estimators (in particular, the Theil-Sen estimator) perform well on the smallest datasets, but that other more standard algorithms do better as the dataset size increases.

International Collegiate Programming Contest (IPPC): Join our team! "The

International Collegiate Programming Contest is an algorithmic programming contest for college students. Teams of three, representing their university, work to solve the most real-world problems, fostering collaboration, creativity, innovation, and the ability to perform under pressure. Through training and competition, teams challenge each other to raise the bar on the possible. Quite simply, it is the oldest, largest, and most prestigious programming contest in the world." The winning team from the regional contest will progress to the divisional competition and compete for a spot in the national competition. If you think you might be interested in participating, send <u>Aaron Bauer</u> an email and you'll be added to the list of people who will get future ICPC emails. Carleton will compete in the regional qualifier in either February or March.

Lovelace (a CS organization for women and non-binary students) wants to help you get prepared. Lovelace's mission is to increase gender diversity in computer science and technology within both the Carleton and Northfield communities. Lovelace members aim to accomplish this through creating supportive and inclusive environments that facilitate effective and fun learning. To learn more, contact Lovelace leadership and ask to join the Lovelace e-mail list. Also, visit the Lovelace Facebook page.

CS Dept. SDA's continue to plan department events. Watch for upcoming emails with more information.

CS Labs – Beverage Caution!! There have been some beverage spills in the computer labs. Please be careful. Lids pop off of the coffee cups provided by the cafes. Spilled beverages can cause major damage.

OPPORTUNITIES:

From the Carleton Career Center:
Carl Connection: **Interactive Fiction Writer** at **Thomas Ballinger '09 (Carleton Alum)**
Application Deadline: November 14, 2021 at 11:59 p.m. CST
This opportunity is brought to us by a Carleton alum, Thomas Ballinger '09 (thomasballinger@gmail.com).

   Do you care about or have written short fiction or fan fiction or similar. Carleton alum is looking for contractors to write short interactive fiction, for work during the term (could be fall, winter, spring) for 10 hours per week. The position might continue with more hours during winter break or summer break.

   This writing is for a science fiction open source game called Endless Sky, originally written by a St. Olaf alum, which presents a branching story in short pieces when e.g. a player lands on a planet or enters a crowded spaceport. This isn't creating a brand new universe: like fan fiction, it needs to be based on and integrate into an existing body of work.

   A small amount of programming will be required (similar to other interactive fiction platforms) but there's no need for experience with this and time spent learning will be paid. You are welcome to reach out to Thomas with any questions regarding the position prior to applying.

   Must be authorized to work in the US. $15/hour, up to 10 hours/week during the term. Learn a little bit more about Thomas. Schedule a time to talk with Thomas: https://calendly.com/ballingt/writing

Position Opening at DASH Laboratory in the Software engineering program at the School of Systems & Enterprises at Stevens. Richie Oyeleke, Ph.D, at Stevens Institute of Technology, has an open position in their lab for a funded PhD with a start date in Spring (January) 2022. This is a fully funded PhD position in the Dash Lab. Applications will be reviewed as soon as they are received.

Distributed Research Experience for Undergraduates (DREU)
Are you an undergraduate student interested in exploring research in computer science? DREU interns have the opportunity to be directly involved in a research project and interact with graduate students and professors on a daily basis. This experience is invaluable for those who are considering graduate school; DREU will provide a close-up view of what graduate school is really like and increase interns' competitiveness as an applicant for graduate admissions and fellowships. Applications are being accepted now through February 15.

The Ph.D. in CS: Getting There and Being Successful
Members of the CRA-Education committee invite you to a webinar for CS undergraduates! Event date is **Monday, November 1, 4:00pm-7:00pm ET**. Topics include:
- What is a Ph.D. in CS and why should I consider it?
- How a Ph.D. differs from a Master's degree in CS
- Timelines
- Preparing a strong application
- Making a smooth transition
- The first few years
- The research apprenticeship
- Beyond the Ph.D.

Register in advance for this webinar. After registering, you will receive a confirmation email containing information about joining the webinar. The webinar will be recorded for distribution via the **CONQUER** web site for individual viewing and departmental screenings.

Internships at Pega: The Career Center has posted Pega internship opportunities in Handshake. Login to Handshake and check out available options.

GirlSecurity Virtual National Security Fellowship
From the Carleton Career Center: The National Security Fellows program is a stipended 15-week knowledge and professional development program designed to allow participants to develop a meaningful understanding of national security, build enduring skills for the future workforce, cultivate the type of relationship-based networks, and curate opportunities to advance throughout college into career. The Fellows program will require 3-5 hours of individual and collaborative learning, project management, and reflection per week. A $1,000 USD stipend will be distributed upon completion of the fellowship. The Program is open to currently enrolled junior or senior high school students and first or second-year undergraduates in the US and its territories. Deadline: November 12, 2021 https://www.girlsecurity.org/fellows-application

From Cornell's CS PhD Program: The Student-Applicant Support Program aims to assist students from marginalized backgrounds as they apply to Cornell's CS PhD program. A graduate student volunteer may provide one round of meaningful feedback on an applicant's resume and statement of purpose (capacity limited). Participation in

the Student-Applicant Support Program does not guarantee admission and our capacity for applications is limited.

To participate in the Student-Applicant Support Program, please submit your application materials here **by 11:59PM EST on November 6, 2021**.
Note: Information will be aggregated and anonymized to evaluate the impact of this program, but individual responses will be deleted at the end of this application cycle. All demographics questions are optional.

HackHolyoke Join the fun online November 13th - 14th for a 24 hour hackathon jam-packed with fun! HackHolyoke aims to make a hackathon that is fun for everyone. We set ourselves apart by unfailingly having at least 50% of our hackers identifying as Women or Non Binary and welcoming college student hackers from all levels (ask us about our beginner track)! Want to Join the Fun? No prior experience necessary!
You can register to participate today! It only takes a few minutes, and the event is totally free! Get ready to hop onto our virtual platform in your PJs, and make something awesome! **Register** here.
Find out more at HackHolyoke.com Email us: HackHolyoke@gmail.com

Become a developer or designer for Hack4Impact!
Info: Hack4Impact (H4I) is a 501(c)3 nonprofit organization that engages software developers and designers at universities across the country to design and implement solutions for nonprofits in need of technological support. We founded a branch at Carleton last year, and since then we've developed a dialogue-based card game app using React Native for Cool Moms Dance Too, an Atlanta nonprofit that uses dance to promote wellness and connection within families. We've also created our own chapter website using React.js from scratch. Since our previous project is coming to an end, we need UI/UX designers and developers like you for our next project this upcoming fall term! If you're interested in contributing to a project like this, where you'll gain real-world development skills, and more importantly, create impact in your community, please email carleton@hack4impact.org. For more information, check out our chapter website, https://carleton.hack4impact.org/, and the national organization's website, https://hack4impact.org/.

Calendar of Upcoming Events:
Nov. 4:   CS Tea Jill Lapore (location is Weitz Cinema) 4:00pm
Nov. 11: **CS Tea** Daniel Alibi (Olin 306) 4:00pm
Nov. 19: Last Day of Classes

Want to receive this newsletter and other CS updates? Sign up for the cs-interest mailing list by contacting Paula Stowe.