CS 680P
Systems for Security and Privacy

Instructor: Kartik Gopalan

Course Information

- Class location: FA 241
  Class date/time: Fri 1:30pm-4:30pm

- Instructor: Kartik Gopalan
  Office: Q-17 ENGB
  Office hours: Fri 10am-11am by Appointment
  Zoom link: https://binghamton.zoom.us/my/kartik.gopalan

- Join Google Classroom using your Binghamton account
  - https://classroom.google.com
  - Use class code k65j5pp

Coverage of Topics

- Kernel-level security
  - protection, isolation, virtualization, trusted computing base, eBPF

- Confidential computing
  - AMD SEV, Intel TDX & SGX, ARM Trustzone

- Hardware-based security threats and mitigations

- Programmable network security (SDN and NFV)

- Cross-cutting security issues in cloud and edge computing

Course Structure

- Weekly paper summaries - 50%

- Presentations - 40%

- Attendance and class participation - 10%

- Attendance and participation is mandatory. You should attend classes in-person in the classroom

- Maximum three unexcused absences after which letter grade may be reduce by one level.

Course Material

- Lecture slides and papers posted on the Google Classroom

- Recommended textbook (not required):
  - Andrew Tanenbaum, Modern Operating Systems, 4th edition
  - Another good book is Operating Systems: Three Easy Pieces, Remzi H. and Andrea C. Arpaci-Dusseau (available online)

Resources you need

- Access to Google Classroom

  - https://classroom.google.com/

  - Use class code : 2qqz6yb

  - Join using your Binghamton email address

  - For class materials, announcements, assignment submissions, and online homework

- BU Email account

  - \<yourid>@binghamton.edu

  - For communicating with me and TA

  - For receiving announcements

Students with disabilities

- Please contact the SSD office for accommodations.
  - https://www.binghamton.edu/ssd/
  - Phone : 607-777-2686 (Voice, TTY)
  - Fax: 607-777-6893
  - Email: ssd@binghamton.edu
  - Office Location: University Union, Room 119

- Talk to them soon. They will send me a letter listing any accommodations required.

- Don't hesitate to tell me if some aspect of the class is not working for you.
  - I will promptly work with you and SSD to fix it.

Asking questions

- Email: kartik@binghamton.edu

- Attend online office hours

- Make Google your friend
  - Can't beat the response time!

- Ask early
  - Don't wait till the last minute
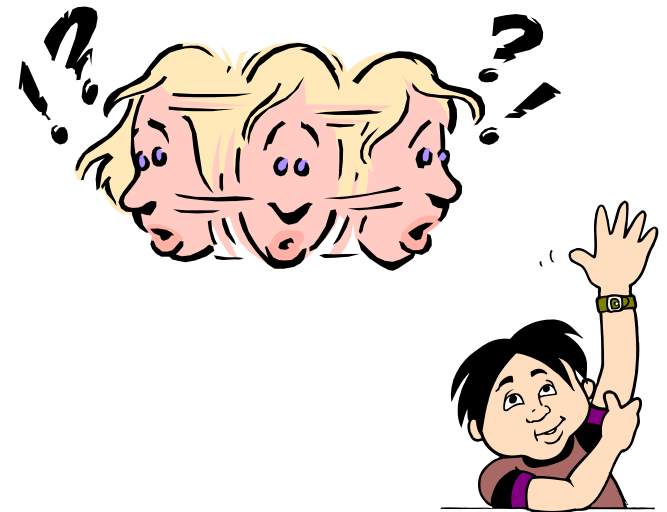
Stressed?

- Maintain perspective
- If you are overwhelmed with this course, talk to me.
- Campus resources:
  - University Counseling Center:
    - https://counseling.binghamton.edu/
    - 607-777-2772
  - Dean of Students Office:
    - https://www.binghamton.edu/dean-of-students/index.html
    - 607-777-2804
  - Interpersonal Violence Prevention:
    - https://www.binghamton.edu/centers/varcc/ivp/index.html
    - 607-777-3062
  - Office of International Student and Scholar Services:
    - https://www.binghamton.edu/international/student-scholar-services/index.html
    - 607-777-2510

Academic Integrity

- Please read the policies in the syllabus

- Do your own work.

- Don't do others' work.

- Don't ask/give solutions, including code.

- Don't get code from the Internet.

- Keep your work private

- Dishonesty ➔
  - You can get an F grade
  - Be referred to the Dean's office

- **AI policy**
  - For this course, it is OK to use generative AI to **understand** some difficult aspects of the paper being discussed that are not super clear from the text of the paper.
  - However **the weekly paper summaries should be written in your own words** without the use of AI tools.
  - It is better to submit imperfect paper summaries of your own that you understand than to submit a summary that is perfectly written by AI but which you don't understand.

Attendance Policy

- Attendance in-person is mandatory
  - If you are sick, I can provide a zoom link.

- Maximum three unexcused absences allowed.

- More than three absences may reduce your final grade by one level.
  - For example, A will become A- or B will become B-

Sickness Policy

- If you feel sick, please do not come to the class.
  - Please attend via zoom, if you can.

- If you are coughing or sneezing, please consider wearing a mask as a courtesy to others.