

CSCI 1300: Starting Computing

Supriya Naidu, Fall 2023

Hi! I'm Supriya

- Call me **Supriya** or **Prof. Naidu**
- **Research interests:**
 - visualization, color perception, human-computer interaction
- **Office Hours:** ECOT 741
 - Wednesdays, 10:30 am – 12 pm
 - Thursdays, 1 – 3pm
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What is Computer Science?

What is Computer Science?

- The study of the principles and use of computers
- Discipline that spans **theory** and **practice**.
 - think in both abstract and concrete terms
- Uses **computational thinking** to solve problems
- Makes computers do new things or accomplish tasks more efficiently

“Computer Science is no more about computers than astronomy is about telescopes”

-Edsger Dijkstra

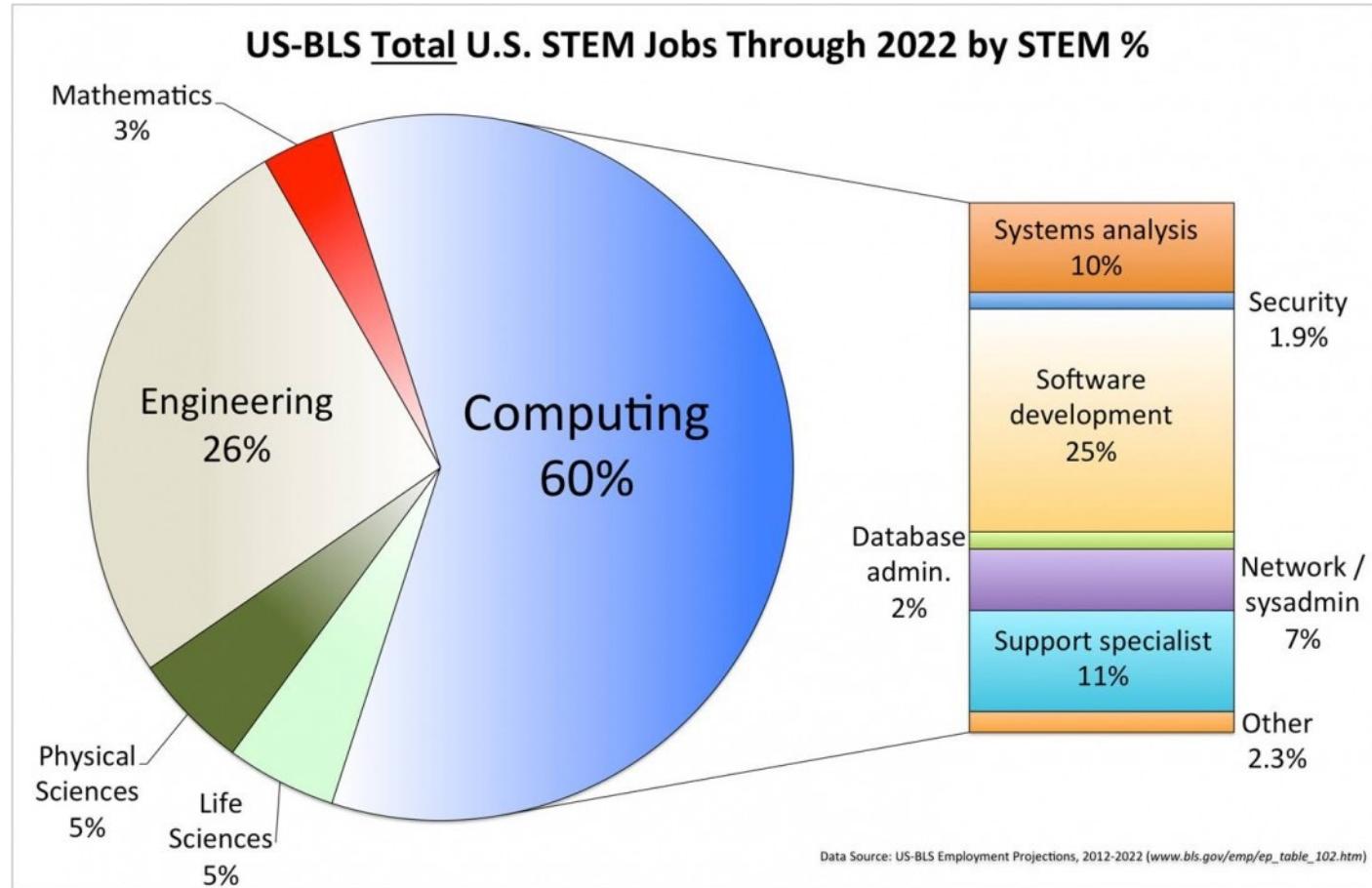
What are we computing?

- Design, analysis and experimentation
- Automation of tasks, improving existing solutions
- Networking, human-computer interaction(HCI), artificial intelligence(AI), machine learning (ML)

Why Computer Science?



What computing jobs are going to be available?



Administrivia

Canvas

CSCI 1300 – CS 1: Starting Computing Fall 23

- Course syllabus
- Office Hours Calendar
- All assignments, lecture slides/videos and other course materials will be distributed through Canvas
- Check it regularly for updates!

2023 Fall Term

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Recent Announcements

CSCI 1300

Computer Science 1: Starting Computing

 Start Here  Syllabus  Schedule  Office Hours
 Modules  Ed Discussion  Instructional team  CU Resources

Welcome to Computer Science 1: Starting Computing

CSCI 1300 is a 4 credit hour course that teaches techniques for writing computer programs in higher level programming languages to solve problems of interest in a range of application domains. The course is appropriate for students with little to no experience in computing or programming. For the Fall 2023 semester, the Instructors are listed below.

[!\[\]\(19fdbd6eaa1508fb9caf367b7a64e245_img.jpg\) View Course Stream](#)[!\[\]\(007bb571fc5331b364ae27ddf8a1c148_img.jpg\) View Course Calendar](#)[!\[\]\(bfa23e0309ec40163031a78578652da3_img.jpg\) View Course Notifications](#)

To Do

 [Recitation 0](#) CSCI 1300:CS 1: Starting Computing 3 points | Aug 29 at 11:59pm

 [Syllabus Quiz](#) CSCI 1300:CS 1: Starting Computing 4 points | Aug 30 at 11:59pm

 [Homework 0](#) CSCI 1300:CS 1: Starting Computing 10 points | Sep 1 at 5pm

Communication

- Send **ALL** questions to **csci1300@colorado.edu**: academic, accommodations, sports, travelling, health issues or concerns

The screenshot shows the CU Syllabus for CSCI 1300 Fall 2023. At the top, there is a logo and the title "Syllabus: CSCI 1300 Fall 2023". Below the title, a note says "See all 6 tabs for all syllabus information". A red box highlights a specific section: "Please send all general course questions to: csci1300@colorado.edu". Below this, there is a statement about integrity and honor, followed by sections on professional email expectations and tips for a professional email.

Syllabus: CSCI 1300 Fall 2023

See all 6 tabs for all syllabus information

About the Course Assignments and Grading Course Requirements Collaboration Communication Course Policies

Please send all general course questions to: **csci1300@colorado.edu**

As a member of the CU community you are expected to consistently demonstrate integrity and honor through your everyday actions.

Professional Email Expectations

Any email correspondence related to the class should be sent from a colorado.edu email address. Please note that we do not read email between 5pm and 9am, or during the weekends. You can expect a response within 24 - 48 hours during the week and within 48 - 72 hours if sent on the weekend.

Send email messages to faculty and staff using a professional format.

Tips for a professional email include:

- Always fill in the subject line with a topic that indicates the reason for your email to your reader.

Computing

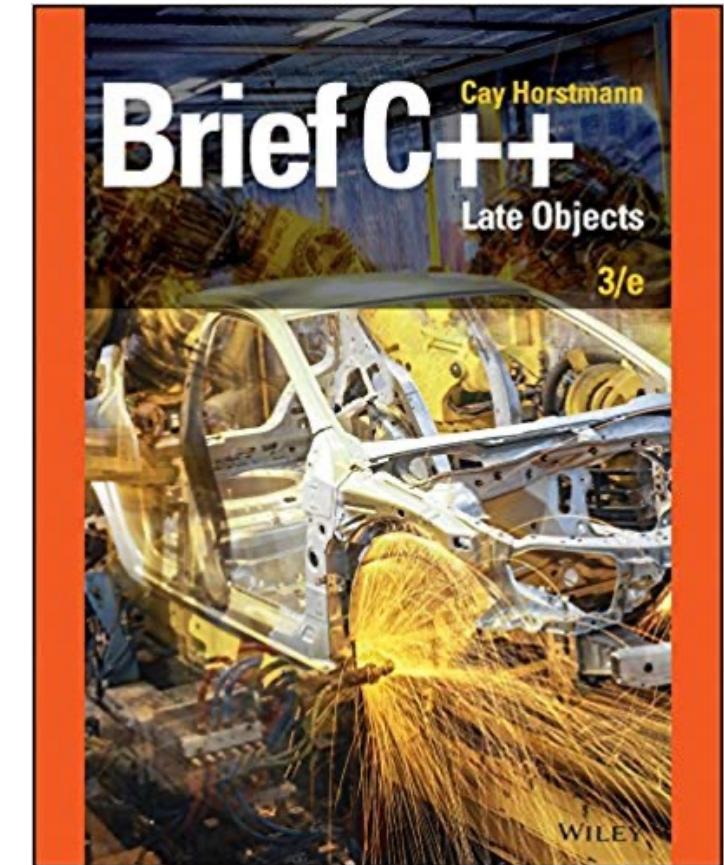
- We will use C++
 - Great mix of efficiency and ease of translating experience to other language later in your computing life
- Visual Studio Code
 - Nice interface to program
 - Debugger, all-in-one platform
 - Talk more later, and in recitation

Textbook – available through Canvas

Brief C++: Late Objects 3rd edition, by Cay Horstmann

- Only available in electronic form
- International, old and PDF editions are okay, but will lack online activities, which we will do in lecture and recitation

Additional reading will be linked to the course Modules as needed



Let's syllabus

You are responsible for knowing and reviewing:

- Exam policy
- Assignments and late submission policy
- Attendance policy
- Classroom behavior
- Collaboration and honor code
- Office Hours policies
- Ed Discussion policies
- Interview policies
- Discrimination and harassment
- Disability accommodations
- Religious observances
- Sexual misconduct, discrimination, harassment and/or related retaliation

Let's syllabus

Workload:

- Homeworks (30%)
- Projects (20%)
- Weekly recitation activities (10%, drop lowest): Attendance in recitations is required.
- Midterms (30%): 67% exam average required to earn a C- or higher in the class
- Class participation (10%, drop 3 lowest)

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-
- Three (3) midterms**
Syllabus: “score of at least a 67% average on the midterms or you cannot receive better than D+ in the course.”

The final exam time slot can be used to take an optional final. However, the final exam score will replace your lowest midterm score.

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Back up your work!

- Google Drive
- Dropbox
- GitHub (**private** repository)
- **No extensions** in event where you didn't back up your work



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Recitation:

- Weekly, mandatory 75 minute lab with programming activities.
- Ask questions about assignments and get extra help.

Attendance Policy

- You must attend recitation each week
 - Your TA will take attendance
- Recitation materials will be posted on Friday the previous week
 - Weekly graded discussion will happen in recitation
 - Time to work on recitation assignments and ask questions
- If you need to miss recitation, make arrangements to go to another recitation: email **both TAs** and csci1300@colorado.edu

Getting help outside lectures

Office Hours calendar on Canvas (TAs, LAs, instructors) – in-person

- *Learning Assistants (LAs)*
 - Undergrads who took this class and love programming. Many of them will lead recitations!
- *Teaching Assistants (TAs)*
 - Graduate students who are enthusiastic and excited about teaching!
 - Lead recitations, help grade, develop materials, field questions on ED, office hours

Ed Discussion

Invite link on Canvas

Announcements will be posted here

- Ask questions in Q & A forum (and answer other students' questions!)
 - There are hundreds of you and only a few of us -- get answers faster
- Discuss work, but **do not post solutions/vital code**
- Send **private** messages to TAs and faculty

New Thread

Search

Cancel

New Question

Schedule Post

Question

Post

Announcement

Title

Category

General Lecture Recitation **Homework** Project Practicum
Quiz Error Logistics

Subcategory

H0 H1 H2 H3 H4 H5 H6 H7 H8

Paragraph

Which part of the homework are you working on?

TODO

What problem are you having and what have you tried so far? Describe the problem in detail and include any relevant screenshots, error messages and small snippets of code

TODO

 Pinned

Keep at top of thread list

 Private

Visible to you and staff only

 Anonymous

Hide your name from students

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Academic Integrity

See the Collaboration Policies tab on the Syllabus page for more details. Here are some highlights.

- “Examples of cheating include: copying the work of another student during an examination or other academic exercise (includes computer programming)”
- “Examples of plagiarism include: [...] copying information from computer-based sources”
- If in doubt, ask us if it’s permitted.



Riding the struggle bus

It's ok to struggle (we all did and still do)

When you're asking for help, be sure to explain...

- what you're trying to do
- what you think should happen
- what you get instead (copy/pastes or screenshots work well)
- what all you have tried
 - if you haven't tried anything, try something first
- use **private** Ed posts (post a "Note") to Instructors if it includes possible solution code



Don't be stuck! Post on Ed, get help during Office Hours!

Riding the struggle bus

Life is hard. We want to help however we can.

- Reach out **before** things get too bad. After is also better than going at it alone.
- Students of Concern Team -- <https://www.colorado.edu/studentaffairs/student-concern>
- Student Support and Case Management --
<https://www.colorado.edu/studentaffairs/sscm> 1
- Counseling and Psychological Services -- <https://www.colorado.edu/counseling/>
- The **Red Folder** -- <https://www.colorado.edu/redfolder/>

Due this week

- Read the Syllabus on Canvas
 - Take the **Syllabus Quiz**.
- Homework 0 - **Install VS Code**
 - Tutorials and videos on Canvas, based on the operating system of your computer
- Recitation 0
- Check the due dates!!!

Pedagogy

A

There is a
problem!



B

You have
solved the
problem
with a
program

Goal

- Develop adaptive expertise for problem solving with computers
- “The ability to apply meaningfully-learned knowledge and skills flexibly and creatively in different situations. This goes beyond acquiring mastery or routine expertise in a discipline...”
- “Involves the willingness and ability to change core competencies and continually expand the breadth and dept of one’s expertise”

Guided Learning: the teachers take the main relevant decisions about the goals of learning, learning strategies, and how to measure outcomes, while taking care of feedback, judgements and rewards.

- CodeRunner questions (homework, mini project)
- Midterms
- Some lecture participation activities
- Some recitation activities

Action Learning: the learners play a much more active role in determining the objectives of the learning than in guided learning; there is a strong element of learner self-organisation and self-planning.

- Final Project
- Some lecture participation activities
- Some recitation activities

Experiential Learning: this is not controlled by teachers and there are no predetermined objectives. What is learned is determined by context, learners' motivations, the others with whom they come in contact, discoveries made, etc. It is a by-product of the activities in which people are involved.

- This is up to you!

A

There is a
problem!



B

You have
solved the
problem
with a
program

Your Toolkit!

- Your destination – the assignment description
- Your planned route – writing diagrams and pseudocode
- Your flashlight and binoculars – debugger
- Your guidebook – the internet! (Google, Stack Overflow, etc)
- Your travel partners – others students in the course (friends, study groups, etc)
- Private guides – teaching assistants and instructors

A

There is a
problem!



B

You have
solved the
problem
with a
program

Next time

- Writing our first program

Questions?