LEC 00

CSE 121

Welcome! 👋

Questions during Class?

Raise hand or send here

sli.do #cse121

BEFORE WE START

Talk to your neighbors:

Introduce yourself!

What is your name? Major?

What did you do over summer break?

Music: 🎷 CSE 121 25au Lecture Tunes 🎵

Instructors: Brett Wortzman & James Weichert

TAs:

Trey	Ava	Caleb	Elden	Anya
Amogh	Reese	Anum	Suyash	Minh
Samrutha	Hayden	Abdul	Sthiti	TJ
Dalton	Aki	Janvi	Paul	Zach
Ailsa	Spencer	Navya	Shayna	Cayden
Ryan	Savannah	Sam	Jesse	Johnathan
Anant	Tamsyn	Jessica	Nhan	

Lecture Outline

Today:

1. Introductions :)
2. About this course
3. Our learning model
4. Culture and community
5. Tools

On Friday:

1. Our first program!
2. Assessment and grading
3. Collaboration

Hi, I'm James! (he/him)

- New Assistant Teaching Professor in the Allen School
- I've lived in California, North Carolina, Georgia, Virginia, and now Washington!
  - Studied computer science and data science in college at UC Berkeley
  - M.S. in computer science at Virginia Tech
- Computer science interests: CS education; AI ethics, policy, and education
- Free time activities: traveling, cooking, reading, skiing, and playing Minecraft!

Hi, I'm Brett! (he/him)

- Associate Teaching Professor
- Frequent intro CS instructor
  - Lead designer/developer of new 12X curriculum
- Also interested in CS education/pedagogy
- Previously:
  - trained CS teachers (and still!)
  - developed CS curriculum
  - taught high school CS
  - worked as a software engineering
- Non-CS hobbies: board games/RPGs, officiating football, announcing robotics competitions

Meet your 34 fabulous TAs!

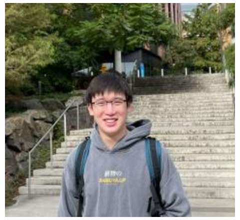










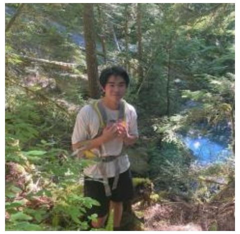











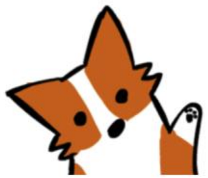
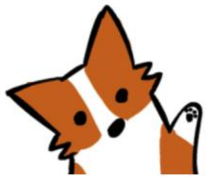










Agenda

Today:

1. Introductions :)
2. **About this course**
   - Learning objectives
   - Similar courses
   - Course components
3. Our learning model
4. Culture and community
5. Tools

On Friday:

1. Our first program!
2. Assessment and grading
3. Collaboration

Learning Objectives

or, "What will I learn in this class?"

Bottom line:
Intro to Programming, part 1

Not quite:

- "How do computers work?"
- "Intro to Java"
- "All you need to program"
- Math!

Learning Objectives:

1. Computational Thinking
2. Code Comprehension
3. Code Writing
4. Communication
5. Testing
6. Debugging
7. Ethics & Societal Impact

Other Similar Courses

Course	Good choice if…
CSE 121 (this is us!)	• You've never programmed before AND • You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming
CSE 122	• You've done *some* programming (roughly one course worth) in any programming language AND • You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming
CSE 123	• You've taken CSE 122 (or equivalent) AND • You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming
CSE 143	• You took CSE 142 (at UW, through UWHS, or at community college) OR • You took AP CS A (or similar) and feel confident in *all* the material
CSE 143X	• You have programmed quite a bit before, but *not* in Java OR • You have lots of extra time to put into learning and tend to pick things up quickly
CSE 160	• You've never programmed before AND • You're interested in data science and analysis OR • You'd rather learn Python than Java* OR • You are, or want to be in a major such as Physics, Bio, Stat, etc. where your primary goal is analyzing data through programming (rather than building software)

Also see: guided self-placement and CSE page on introductory courses for more info.

Course Components

LECTURES x20

- We're here!
- Introduce concepts, practice ideas, discuss applications.
- Pre-class materials to prepare for class each day. Due **before** class.

SECTIONS x16

- Held in person
- More practice, reviews, applications
- TA advice, how to be an effective student
- Preparation for quizzes / exams
- Exit ticket done at end of section

Meetings

PROGRAMMING ASSIGNMENTS x4

- Structured assignments
- Programming in Java
- Applying & implementing course concepts

CREATIVE PROJECTS x4

- More open-ended assignments
- Explore new ideas and applications

QUIZZES x3

- Taken in quiz section
- 45 minutes on paper

EXAM x1

- Culminating exam
- **Wed, Dec. 10th**
- 12:30 – 2:20 PM

Graded Assignments

Agenda

Today:

1. Introductions :)
2. About this course
3. **Our learning model**
   - Learning objectives
   - Similar courses
   - Course components
4. Culture and community
5. Tools

On Friday:

1. Our first program!
2. Assessment and grading
3. Collaboration


Flying Pigeon

Digression: My Pandemic Hobby

Amigurumi: Japanese art of creating crocheted or knitted stuffed toys

Digression: My Pandemic Hobby

Amigurumi: Japanese art of creating crocheted or knitted stuffed toys

Digression: My Pandemic Hobby

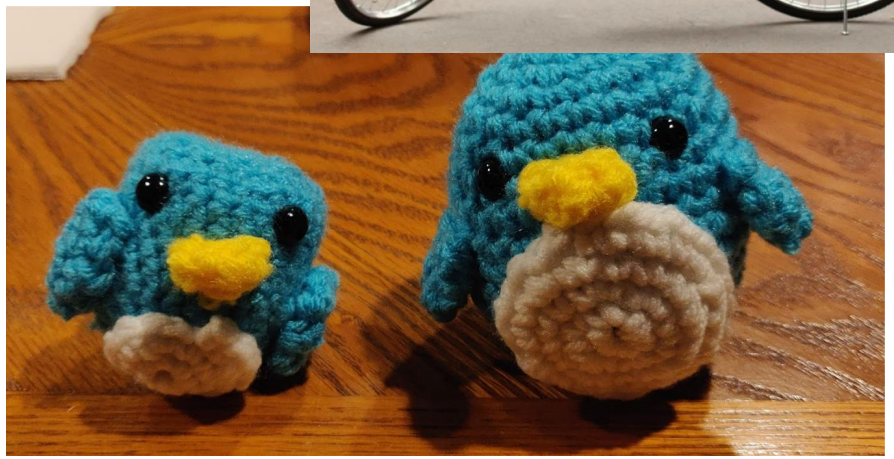
Amigurumi: Japanese art of creating crocheted or knitted stuffed toys

How Learning Works

Learning requires **active participation** in the process.

It's not as simple as sitting and listening to someone talk at you!

- Requires **deliberate practice** in **learning by doing**
- Benefits from **collaborative learning**
- Does not work well if you cram everything!



Pre-Class Materials

PRE-CLASS MATERIALS

PCMs are a core element of the course

- Prepare for each lecture with **readings & practice problems**
- Should take **~30 minutes per lecture** (why we don't have Monday lectures!)
- Class will start with a brief recap, then pick off where we left off

Pre-Class Materials

PRE-CLASS MATERIALS **PCMs are a core element of the course**

- Prepare for each lecture with **readings & practice problems**
- Should take **~30 minutes per lecture** (why we don't have Monday lectures!)
- Class will start with a brief recap, then pick off where we left off

This means…

- We can spend lecture diving deeper, answering questions, and think-pair-share
- You can ask about pre-lecture material in class or section!

Pre-Class Materials

PRE-CLASS MATERIALS **PCMs are a core element of the course**

- Prepare for each lecture with **readings & practice problems**
- Should take **~30 minutes per lecture** (why we don't have Monday lectures!)
- Class will start with a brief recap, then pick off where we left off

This means…

- We can spend lecture diving deeper, answering questions, and think-pair-share
- You can ask about pre-lecture material in class or section!

Pre-class materials are **ungraded**, which means…

- It's okay if you find them challenging – that means you're learning!
- But you should do them, and we will assume you've done them

Consistent and Active Participation

ATTENDANCE **Attendance is not graded, but it's strongly encouraged!**

- Lectures and sections are not going to be just us talking at you!
- Instead: live in-class coding, debugging, think-pair-share, and problem—solving
- Spending ~1-2 hours each day over Tuesday - Friday is **much more effective** than cramming before the assignment is due!

Consistent and Active Participation

ATTENDANCE **Attendance is not graded, but it's strongly encouraged!**

- Lectures and sections are not going to be just us talking at you!
- Instead: live in-class coding, debugging, think-pair-share, and problem—solving
- Spending ~1-2 hours each day over Tuesday - Friday is **much more effective** than cramming before the assignment is due!

Catching up:

- All lectures are recorded on Panopto; slides are on our website.
- Section materials are on Ed, but section will not be recorded

Metacognition

- **Metacognition**: asking questions about your solution process.

- Examples:
  - **While debugging**: explain to yourself why you're trying this change.
  - **Before running your program**: make an explicit prediction of what you expect.
  - **When working**: be aware when you're not making progress, so you can take a break or try a different strategy
  - **When designing:**
    - Explain the tradeoffs with using a different data structure or algorithm.
    - If one or more requirements change, how would the solution change as a result?
    - Reflect on how you ruled out alternative ideas along the way to a solution.
  - **When studying**: what is the relationship of this topic to other ideas in the course?

Agenda

Today:

1. Introductions :)
2. About this course
3. Our learning model
4. **Culture and community**
5. Tools

On Friday:

1. Our first program!
2. Assessment and grading
3. Collaboration

Practice: Think

sli.do #cse121

Think-Pair-Share: Inclusive Environments

CSE 121 will have many think-pair-share activities. Let's practice! Today's think:

What was an experience you had that made you feel welcome or included in a learning environment?

1. **Think** on your own, in silence for about ~ 30 seconds
2. **Pair** with your neighbor about it (and introduce yourself!!)
3. **Share** in sli.do & in class (I'll take a few volunteers from both)

Practice: Think

sli.do #cse121

Think-Pair-Share: *Exclusive* Environments

CSE 121 will have many think-pair-share activities. Let's practice! Today's think:

What was an experience you had that made you feel unwelcome or excluded in a learning environment?

1. **Think** on your own, in silence for about ~ 30 seconds
2. **Pair** with your neighbor about it (and introduce yourself!!)
3. **Share** in sli.do & in class (I'll take a few volunteers from both)

The CSE 121 Community

ABOUT US

- Currently 562 students enrolled!
  - *Very few* are CSE majors
  - Wide range of backgrounds, interests, and goals
  - ***Everyone*** is new to programming

OUR GOALS

- Foster an **inclusive** and **supportive** environment for all students to thrive by:
  - being respectful
  - being kind and understanding
  - being honest
  - being ourselves

The World Around Us

College is challenging and CSE 121 isn't your only class.

Life is unpredictable and things happen.

We can't leave the impacts of the world around us at the classroom door.

OUR POLICIES

Our course policies are **designed for flexibility**:

- Resubmissions
- Dropping quiz/exam problems
- Asynchronous help
- Lecture recordings

SUPPORT

We're here to **support you as a student and as a person**.

Please **reach out** if you're struggling or have circumstances that require extra support.

Learning in CSE 121: Live Support Systems

Programming is hard! We **want** to give you collaborative support!

Introductory Programming Lab (TA Office Hours) – starting Week 2

- > 40 hours/week (and highly rated in the class!)
- Face-to-face help from TAs on **any** course questions

Instructor Office Hours – starting today!

- We don't byte!
- Great for things from lecture, personal questions, or just saying hi

Learning in CSE 121: Async Support Systems

Ed Board

- Best for content and logistics questions – 562 of you >> 36 of us!!
- Encourage public posts, except for things about **your** graded work
- Answer other students' questions – great way to learn!

Email

- Best for personal circumstances and/or private questions
- If unsure, always feel free to email Brett and James (cse121-instructors@cs.washington.edu)
- May politely ask you to post on Ed instead!
- For emails, **please use your UW email** (protecting student privacy!)

Help Us Improve!

This is still a relatively new course! We're *always* looking for feedback on how to improve the class for you and for future students.

- We ***really*** value your feedback!
- Let us know what's working and what isn't working for you!

Several feedback mechanisms:

- Built into the class (e.g. reflections, mid-quarter feedback sessions)
- Post on discussion board (can be public/private)
  - Note: anonymous is anonymous to other students, *not* to staff
- Use CSE's Anonymous Feedback Tool (also on website)

Agenda

Today:

1. Introductions :)
2. About this course
3. Our learning model
4. Culture and community
5. **Tools**
   - Course website
   - Ed
   - AI in CSE 121

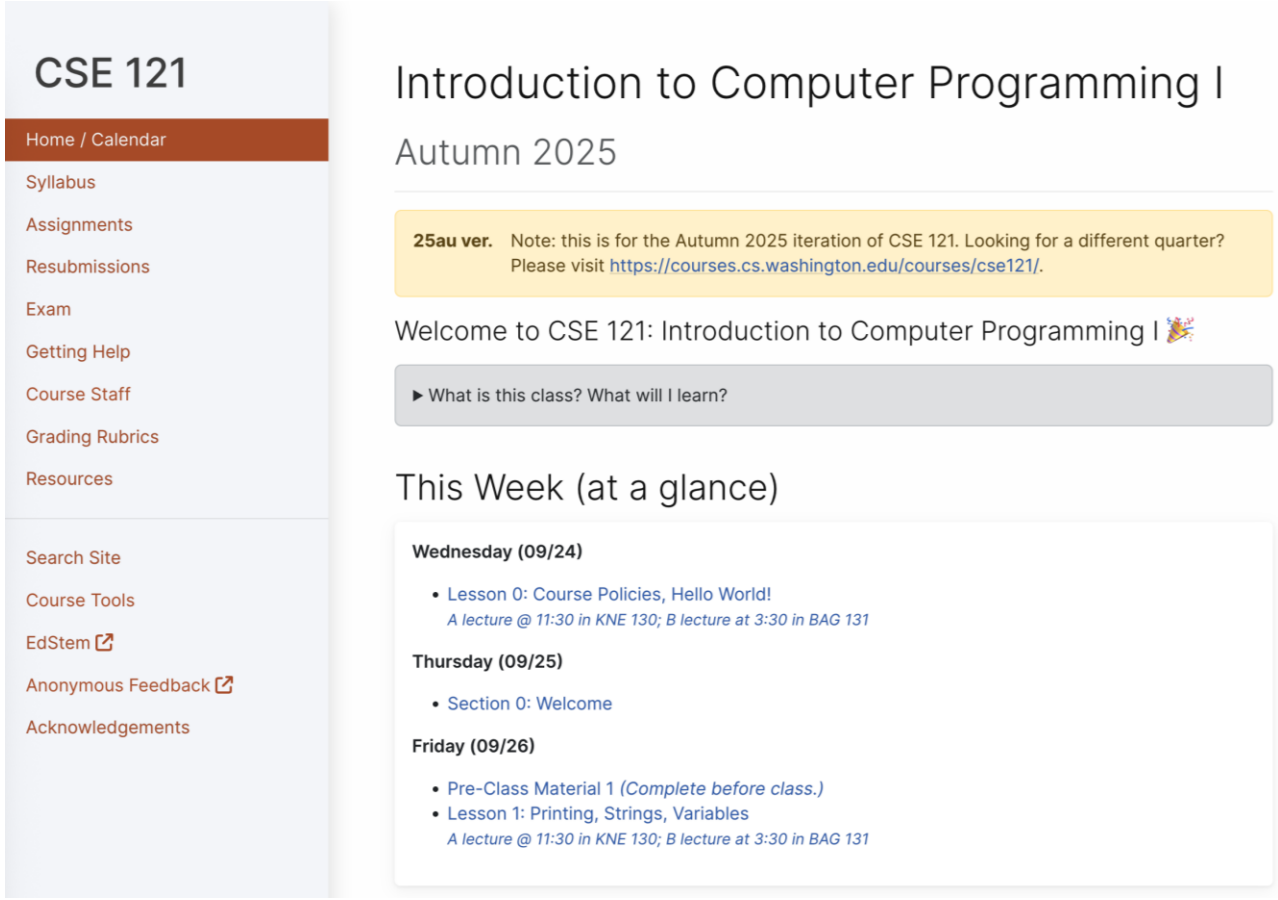
On Friday:

1. Our first program!
2. Assessment and grading
3. Collaboration

Course Website

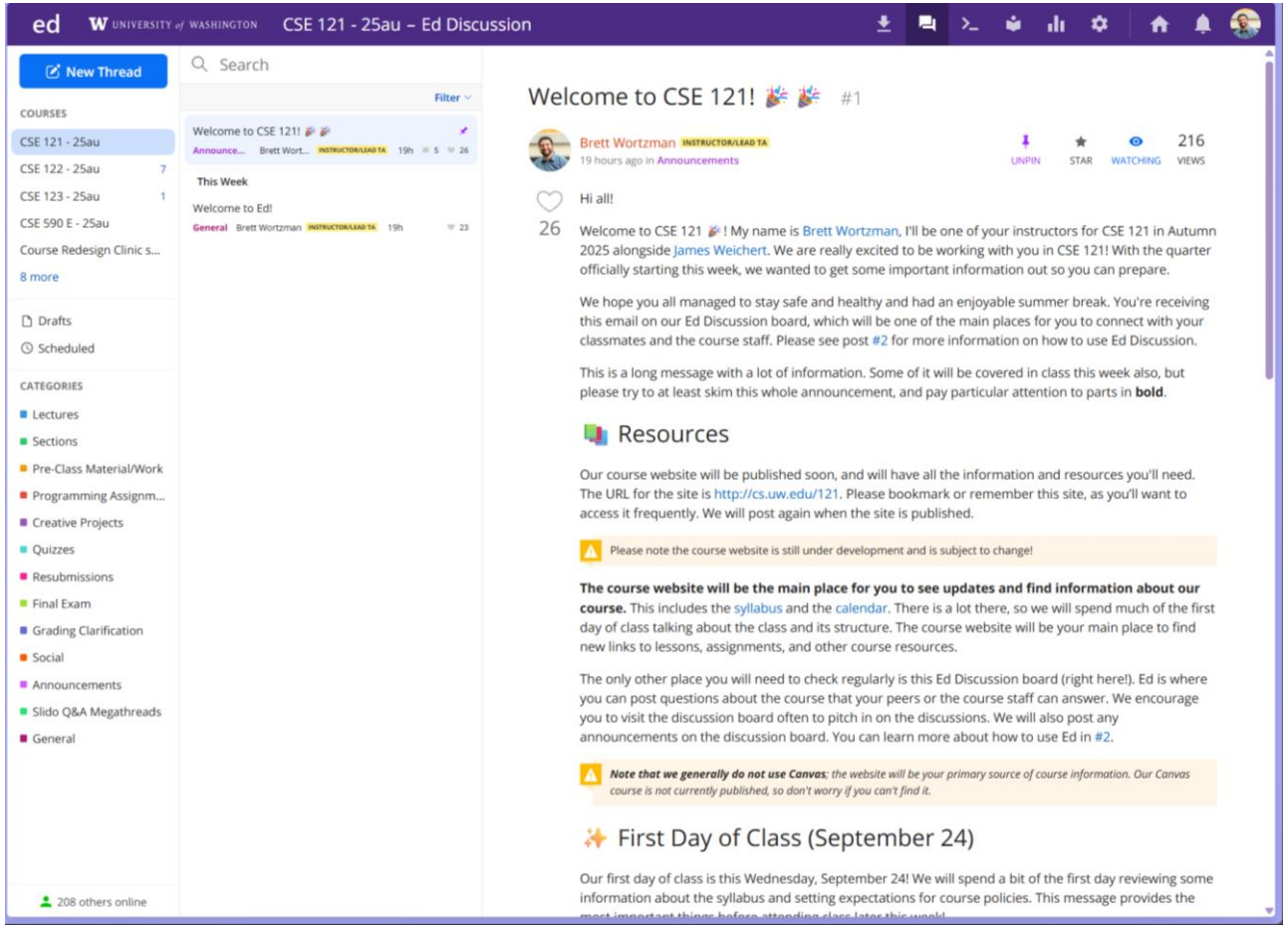
cs.uw.edu/121

- Primary source of course information (**not Canvas**)
- Calendar will contain links to (almost) all resources
- Please **review syllabus ASAP**
- Let's go on a website tour :)



Ed

- Our online learning platform
- Lessons, sections, announcements
- Place to ask questions
- Also, **where we'll code!**
- Intro and walkthrough in **Section 0**



Some Other Course Tools

sli.do

- Ask questions in class
- Live activities (ungraded)
- No account needed

Canvas

- Panopto lecture recordings (also linked from website)
- Some grades*

My Digital Hand

- Queueing in office hours

Gradescope

- Quiz and final exam grading

AI and CSE 121: Our Philosophy

Computing applications enabled by **artificial intelligence (AI)** are increasingly common and more widely used for a variety of tasks.

It is becoming more difficult to teach an introductory computing course without acknowledging the **existence of AI tools**.

AI and CSE 121: Our Philosophy

Computing applications enabled by **artificial intelligence (AI)** are increasingly common and more widely used for a variety of tasks.

It is becoming more difficult to teach an introductory computing course without acknowledging the **existence of AI tools**.

But as first-time programmers, **you still need to learn and practice effectively using core programming 'building blocks'**.

This is what CSE 121 is for.

CSE 121 AI Policy

No part of any graded work may touch an AI tool.

You may not copy and paste any work generated by AI into any graded submission, nor may you copy and paste any work from or for a graded assignment into an AI tool. All other uses of AI on graded work must be cited.

cs.uw.edu/121/syllabus/#using-ai-in-cse-121

CSE 121 AI Policy

No part of any graded work may touch an AI tool.

You may not copy and paste any work generated by AI into any graded submission, nor may you copy and paste any work from or for a graded assignment into an AI tool. All other uses of AI on graded work must be cited.

ALLOWED

- Asking AI to **explain an error message**
- Asking AI to **explain the functionality of non-graded code** snippets
- Asking AI to **suggest additional information** or resources

PROHIBITED

- **Generating code, comments, reflections**
- Using AI to **'solve' an assignment**
- Using AI to **write, modify, or extend** reflections, code, comments, etc.

cs.uw.edu/121/syllabus/#using-ai-in-cse-121

"Homework" for Next Time

First assignment will be released Friday, but there are some things to do in the meantime.

TODOs this week:

- Fill out the introductory survey (this is Thursday's section exit ticket)
- Go meet your TA and classmates in Thursday's quiz section
- Complete the pre-class material for Friday (see website/calendar)
- Check over syllabus details on website