



HackHPC@ADMI22 | Training Session



XSEDE

Extreme Science and Engineering
Discovery Environment



TACC

TEXAS ADVANCED COMPUTING CENTER



Science Gateways
Community Institute



HackHPC@

ADMI

High Performance Computing
and Gateways 2022 Symposium
www.admiusa.org



Join the
HackHPC@ADMI22
Discord using this
QR Code!

Mentor Overview

<https://hackhpc.github.io/ADMI22/>



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Introductions - Icebreaker



CHARLIE DEY (TACC)



JE'AIME POWELL (TACC)

Agenda

01 Hackathon Objectives
and Student Outcomes

02 Who are the students?

03 Sample Project
Timeline

04 Deliverables and
Resources

05 Mentoring Information

- Expectations/Principles/
Challenges
- Kick-Off "*The Draft*"

06 Mentor Hack

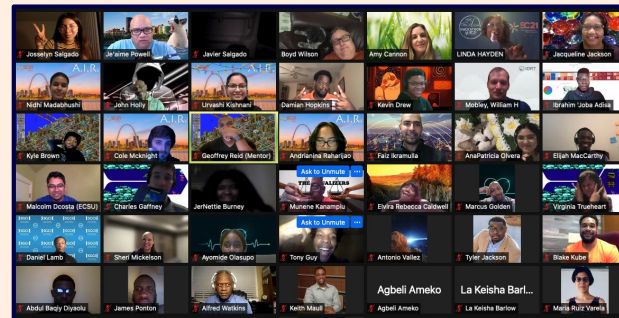
The Objective of HackHPC@ADMI

The hackathon aims to harness the resources, skills, and knowledge found in the HPC community in an effort to provide applied exposure towards students from 2-4 year post-secondary educational institutions. In short, the hackathon will provide HPC skills and training while targeting problems that directly affect the participants.

Develop knowledge about solutions to identified issues affecting St. Louis through application of data analysis/presentation or management.

Student Outcomes

- Increased familiarity with data science in the cloud
- Experience collaborative software engineering
- Develop professional communication skills





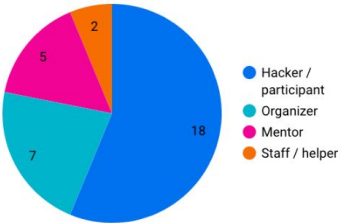
Total Registrations
32

School
9

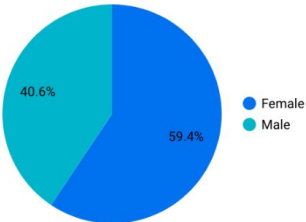
Student Participants
18

Mentors / Staff
7

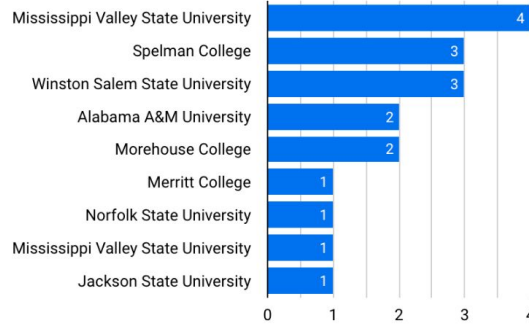
Registrations by Role



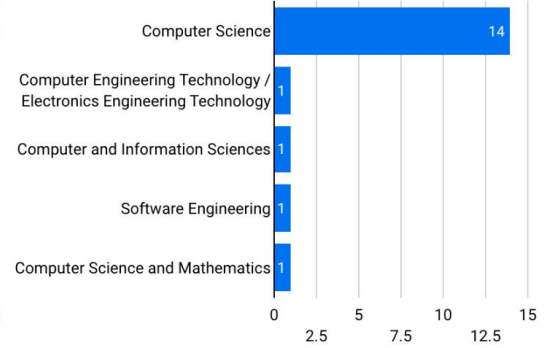
Registrations by Gender



Registrations by School



Registrations by Major



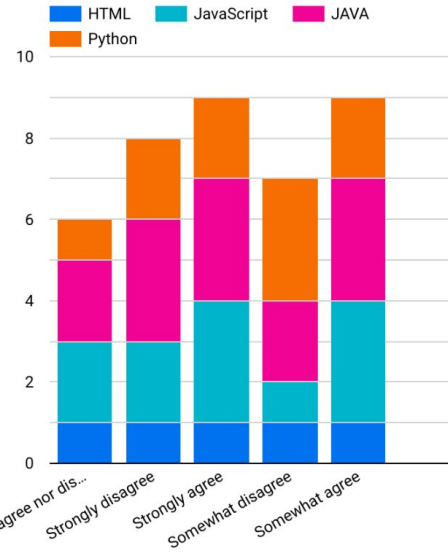
	Provided Team Mentors	Record ...
1.	Elvira Caldwell	1
2.	Dr. Watkins	1
3.	Thorna Humphries	1
4.	null	15

Grand total

18

1 - 4 / 4 < >

Participant Experience by Programming Language



Sample Project Timeline

- Select a project
 - identify Milestones (Major/Minor)
 - identify possible logistical issues
- Deliver a project proposal presentation
- Regular check-ins
- Final presentation with deliverables:
 - Repo with code and data
 - Demonstration
 - Presentation

- Metrics for selecting a “winner”
 - Project Impact
 - Viability / Usefulness
 - The creativity of execution /Wow-effect
 - UX / Polish
 - Technical complexity
 - Collaboration
 - Presentation
 - Completeness

Student Deliverables and Resources

Deliverables:

- Source code Including Comments
- PDF of presentation
 - Team members with pictures
 - Use of HPC technology in the project
- Github Repository Link
 - README.md with project description

Resources:

- Google Cloud (Provided Credits)
- Cloudy Cluster
- Most Commonly Used
 - Python
 - Jupyter Notebooks
 - Node.Js (JavaScript)
 - Repl.it (Collaborative Environment)
 - HTML
- Discord - <https://discord.gg/ARq3vwWafF>



Mentor Deliverables

- [During Kick-off Meeting] 1 Slide-1 Minute describing your idea for a project**
 - Elevator pitch for your project
 - Student teams will use this to determine with which project they would like to work during "**The Draft**"
 - [Pro Tip:]** Keep it short ($\leq 2\text{min}$) and show your personality when presenting
- [During Event] 1 minute or less Video introducing your team**
 - Include all team members, team name, and team project
 - Used for initial Viewer's Choice award presentation
 - Presented during the morning "Check In Session" of the final day.
 - A prize will be awarded to the best video!*

<https://hackhpc.github.io/ADMI22/>

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Example Video

<https://youtu.be/CLqSTrCt6UU>

What Can You Expect as a Mentor?

Your mentoring will be iterative

Your students will experience challenges,
and so will you as a mentor

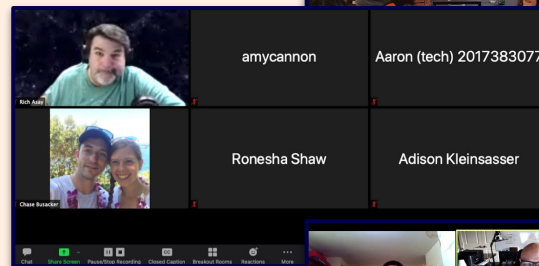
You can't solve everything in 96 hours! (*No really you CAN NOT!!!*)





What Challenges Does a Mentor Solve?

- Imbalance in participation
- Project direction isn't viable
- Students are reluctant to drive the process
- Students just want the answers
- Morale decreases over time
- Students do not communicate





Fundamental Principles of Mentoring

- Observe the students, not the work.
- Be present, but not omnipresent.
- Use critical questions, not criticisms.



Your Task Today

Choose a Mentor Challenge, and describe a strategy you will use to address it

- What is the problem?
- What technique are you going to develop or use to tackle the problem?
(one sentence)
- Tell a story of ideally, how you think this will play out
- Collaborate and report out, with a presentation visual





Example Technique

Problem: How do you get feedback from your students, when they might be reluctant to criticize the type of help you've given them?

Answer: Like, Wish, Wonder!

Describe: Students write a short one sentence reflection about their learning experience, where they describe something they liked, something they wished, something they wondered. They will take turns sharing. All students participate. In doing so, students are given an opportunity to prepare an answer rather than being "put on the spot", and any deltas come are reframed as "further questions" rather than frustrations



Mentor Mini-HACK (7 minutes)

Task:

From the "Common *Issues when Mentoring*" box pick one problem as a group and develop a technique to resolve it.

Deliverable:

One (1) slide and present the developed technique in one (1) minute.

Common Issues when Mentoring:

- Imbalance in participation
- Project direction isn't viable
- Students are reluctant to drive the process
- Students just want the answers
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Mentoring Techniques - Did you notice?

1. Getting to know your participants
2. Project purpose/goals
3. Gamification
4. Scoping the project
5. Student guidance/counseling
6. Student project roles and responsibilities
7. Adjusting to student skill levels
8. Critical questioning





Like, Wish Wonder this Training!

Now to guide you through a post hack reflection using the “Like, Wish, Wonder” technique.

Each person gives:

1 - Like & 1 - Wish and/or Wonder

Audience if you agree, give the “snaps” or 

Questions and Concerns

Next Training Sessions:

- **GitHub/Discord [3/24/22]**

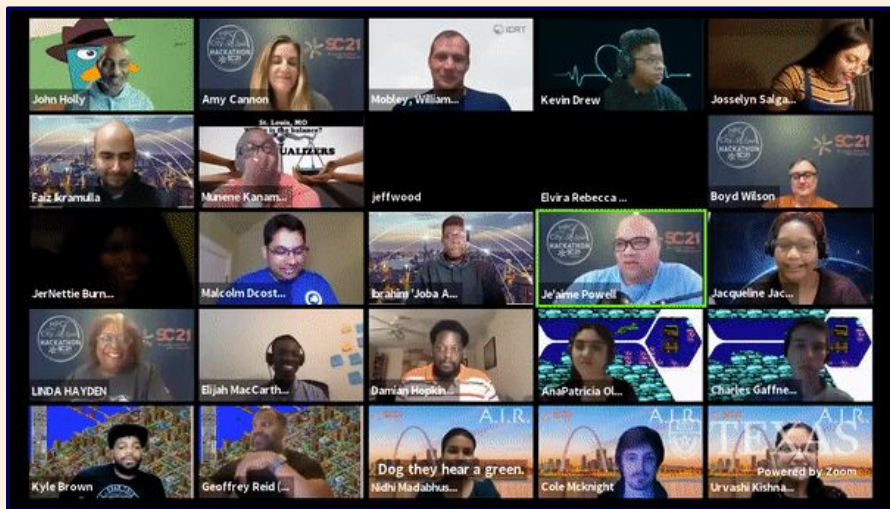
Schedule:

<https://hackhpc.github.io/ADMI22/schedule.html>

Presenters **Contact Information:**

Charlie Dey (TACC) - charlie@tacc.utexas.edu

Je'aime Powell (TACC) - jpowell@tacc.utexas.edu



<https://hackhpc.github.io/ADMI22/>

Storyset

Create your Story with our illustrated concepts. Choose the style you like the most, edit its colors, pick the background and layers you want to show and bring them to life with the animator panel! It will boost your presentation. Check out [How it Works](#).



Pana



Amico



Bro



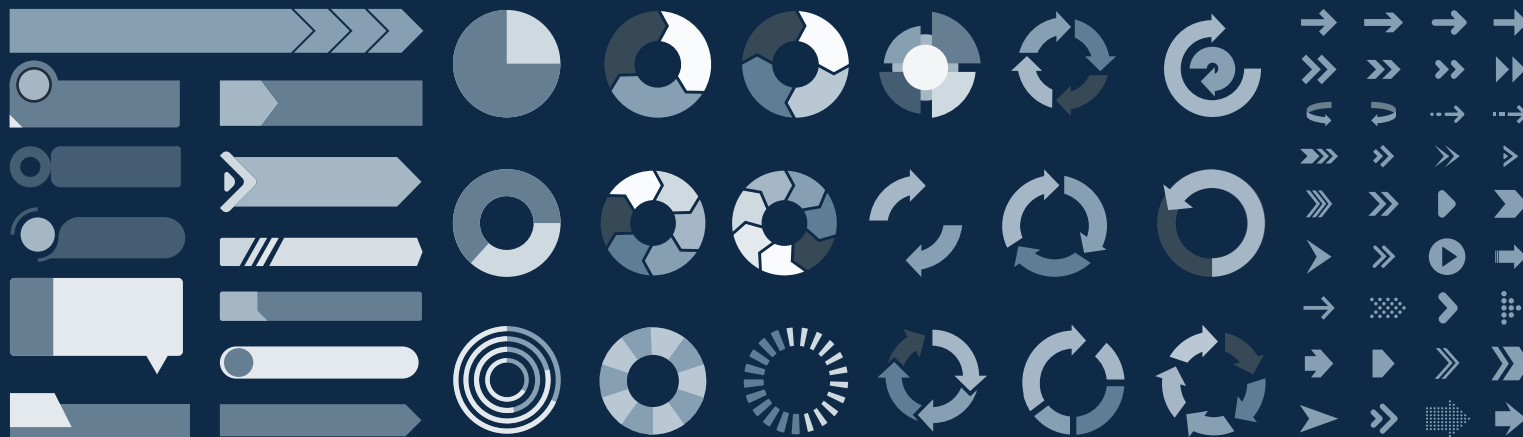
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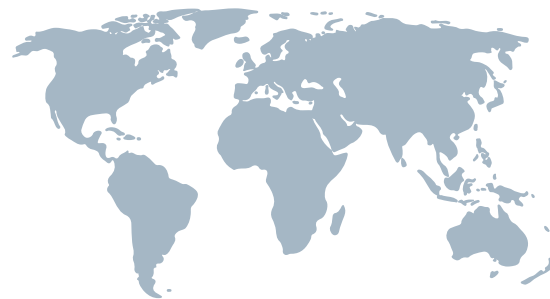


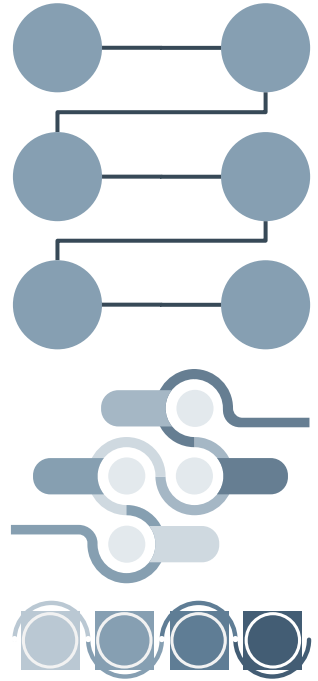
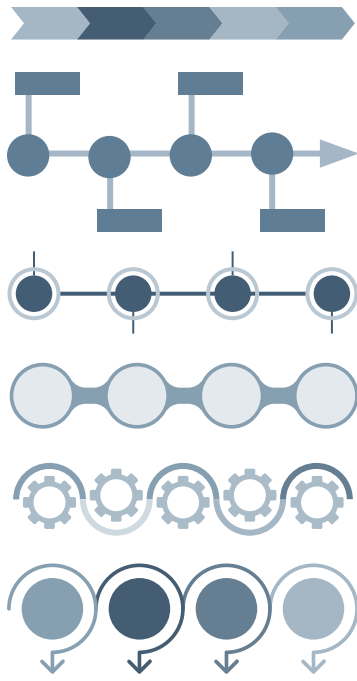
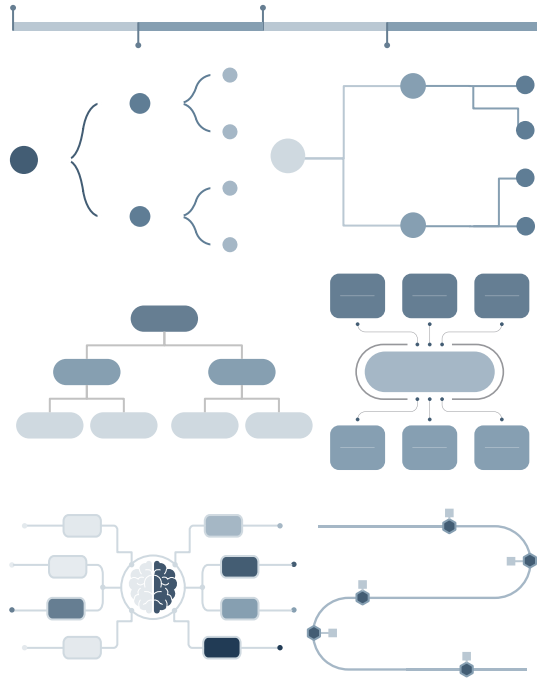
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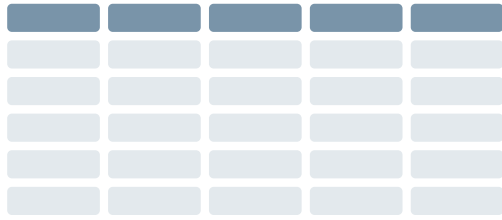
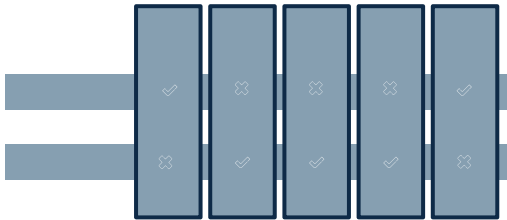
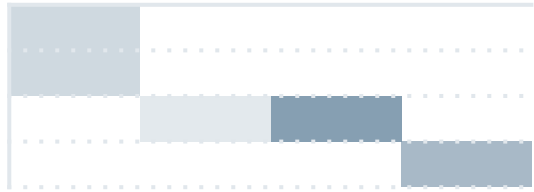
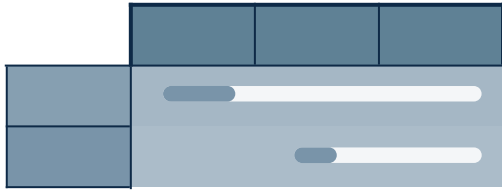
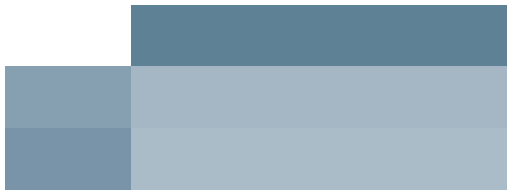
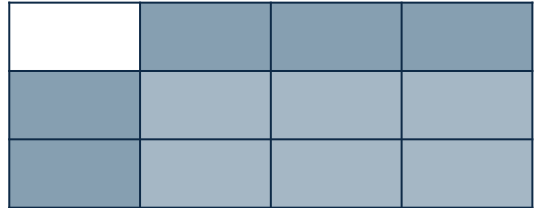
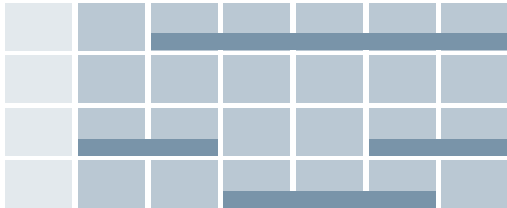
Use our editable graphic resources...

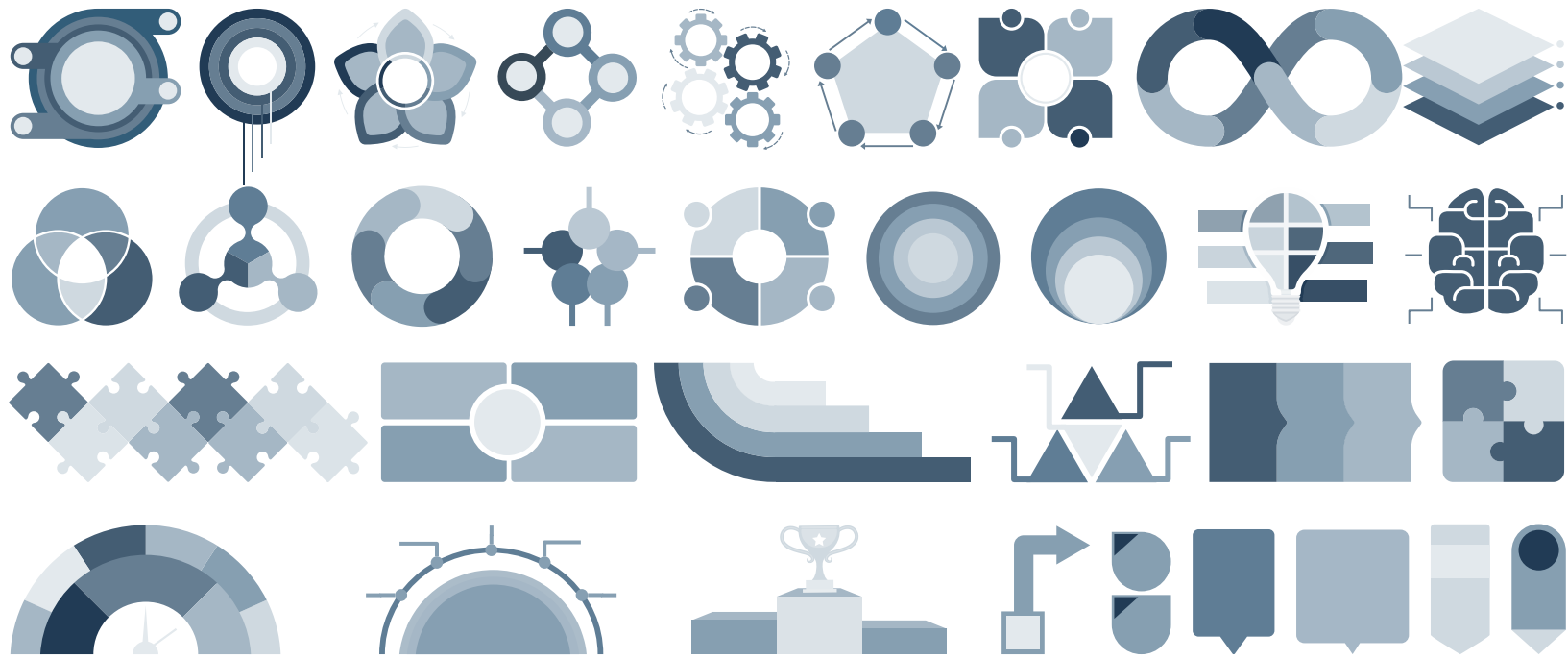
You can easily resize these resources with no loss of quality. To change the color, just ungroup the resource and click on the object you want to change. Then, click on the paint bucket and select the color you want. Group the resource again when you're done. You can also look for more infographics on [Slidesgo](#).

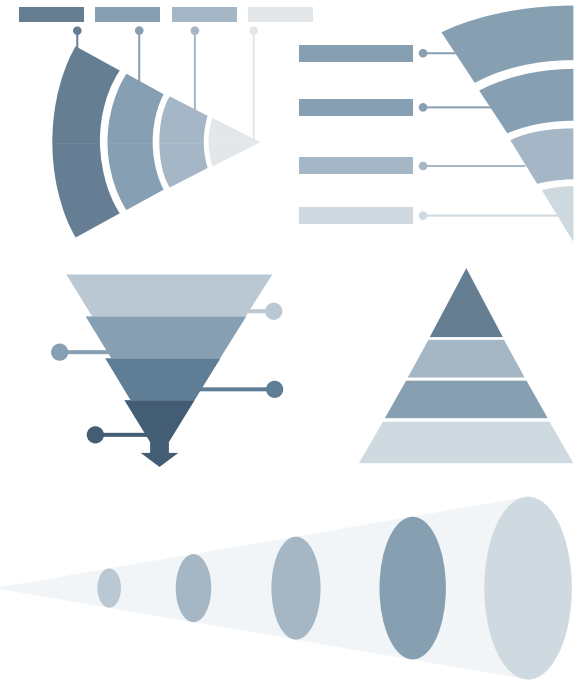
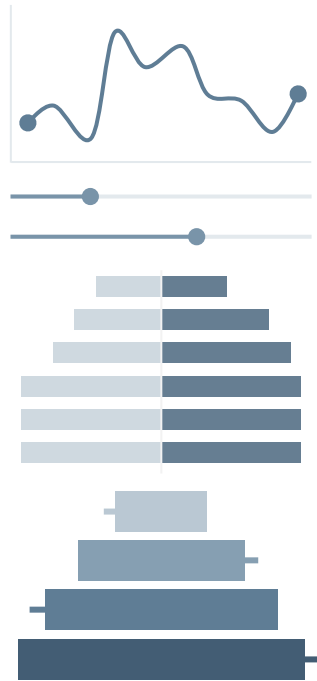












You can resize these icons without losing quality.

...and our sets of editable icons

You can change the stroke and fill color, just select the icon and click on the paint bucket/pen.

In Google Slides, you can also use Flaticon's extension, allowing you to

customize and add even more icons



Educational Icons



Medical Icons



Business Icons



Teamwork Icons



Help & Support

Icons



Avatar Icons



Creative Process



Performing Arts



Nature Icons



SEO & Marketing Icons



