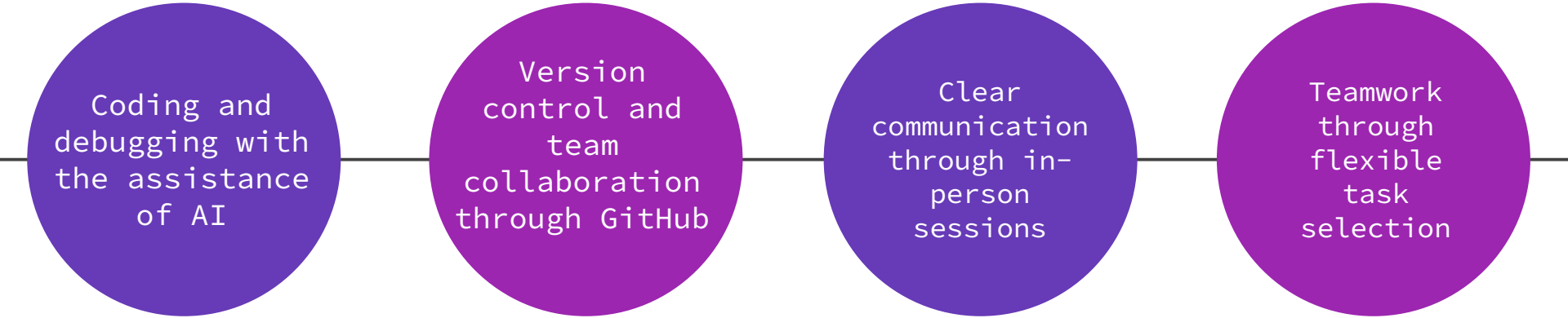
Agentic AI workshop final presentation

By: Kevin, Ella, Stella, Andy, Chloe, and Bryan

Project Introduction

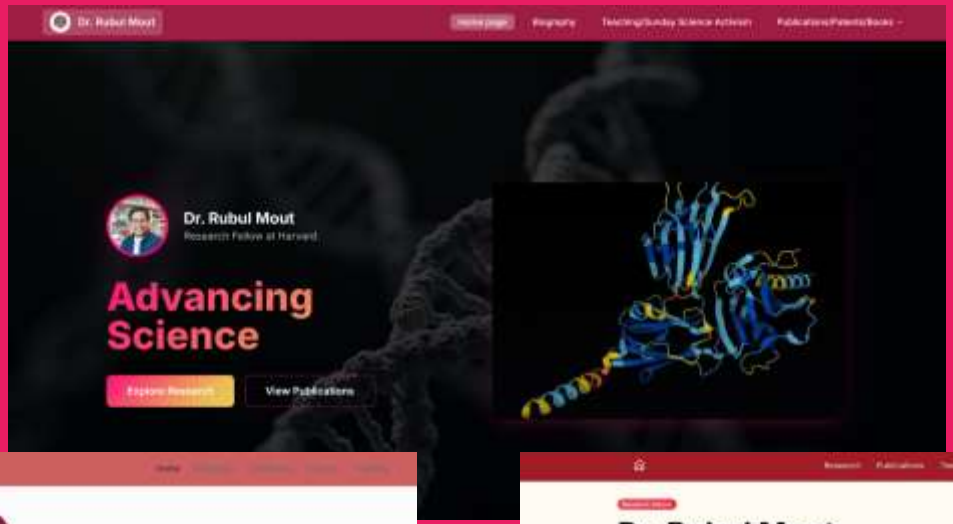
- Our client, Dr. Rubul Mout, is a research fellow affiliated with Harvard Medical School and Boston Children’s Hospital. Recently, a paper he contributed to was published in the science journal “Cell”.
- This noteworthy accomplishment caused Dr. Rubul Mout to gain attention, which increased the amount of people wanting to contact him about his works.
- His old website was outdated, and he wanted to own a personal domain, so our goal was to aid him in both of these topics.

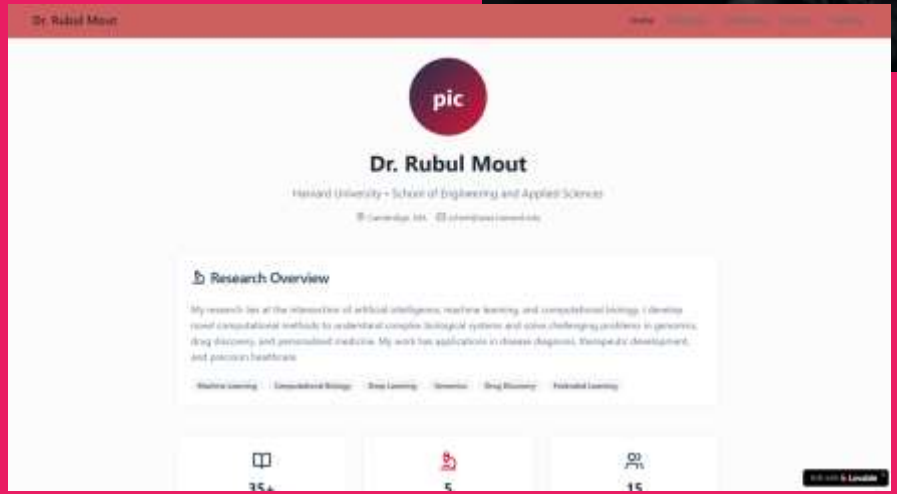
Skills we used

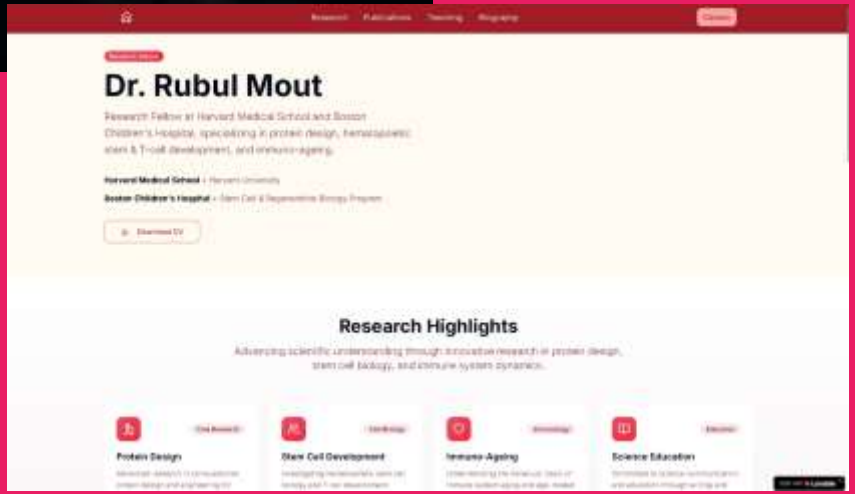


Example Prototype Websites

Early prototype websites generated by the Lovable AI


Dr. Rubul Mout
Dr. Rubul Mout
Research Fellow at Harvard
Advancing Science
View Publications


Dr. Rubul Mout
pic
Dr. Rubul Mout
Harvard University • School of Engineering and Applied Sciences
Research Overview


Dr. Rubul Mout
Research Fellow at Harvard Medical School and Boston Children's Hospital, specializing in protein design, hematopoietic stem & T-cell development, and immune aging.
Research Highlights
Protein Design
Stem Cell Development
Immune Aging
Science Education

Ella

- Standardizing color scheme and design elements
  - Buttons, font size, spacing, etc.
- Working on navigation bar & creating new pages
- Teaching, books, and news pages

- Manually changing design elements and colors
- Effective collaboration
  - Compromising with teammates
  - Clear communication to avoid conflicts

Color Scheme

-Harvard maroon
-Primary accent color
-Used for navigation bar, icons, chatbot header, etc.

-Second accent color (for dark backgrounds
-Used for title, footer text

-Used for most elements and text boxes
-Stands out against background

-Background
-Dark theme

Bryan - Things I Learned

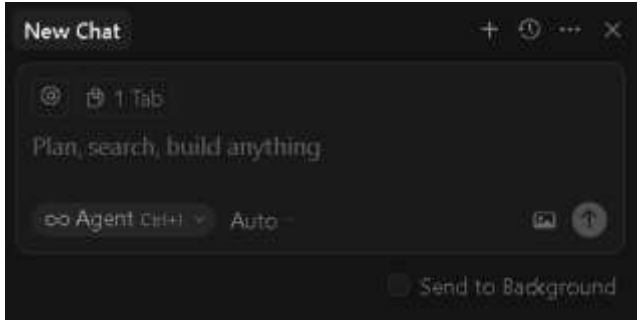
Over these past three weeks, I've developed the following skills:

Effectively working collaboratively on a project with a team

Designing a website using tools such as Github, Cursor, Lovable, Netlify, and more.

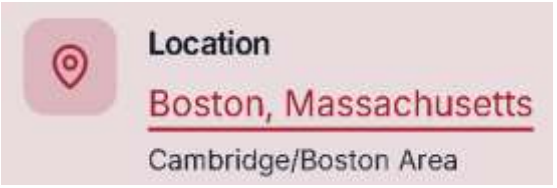
Creating a personal website that fits a client's needs and revising it based on their feedback

Bryan -What I Contributed

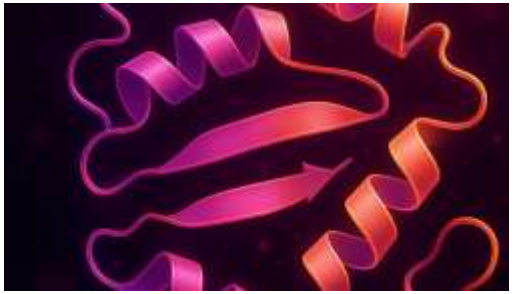


Creating prompts to have the LLM implement the desired changes accurately + quickly.

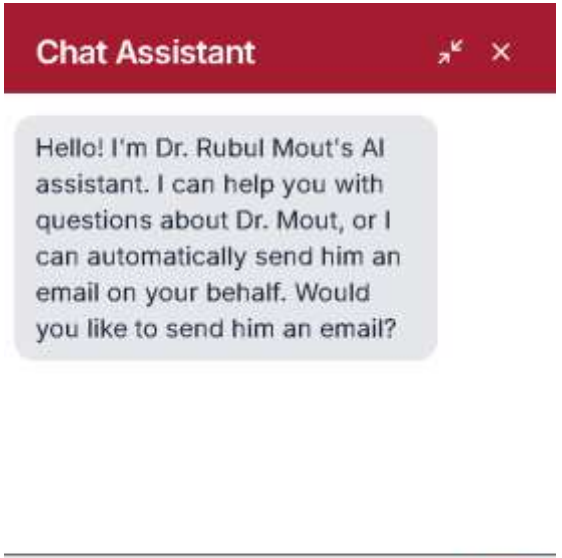
Replacing the favicon (tab icon) with a more detailed image without causing site errors.



Coding hyperlinks to redirect to a map or email app, depending on the text.



Generating images that are both aesthetically pleasing + scientifically accurate.



Designing a chat box window that will automatically scroll as messages are sent.

Kevin

What I did:

- Generated original home page design
- Implemented redirection to actual publication pages under the publications tab and polished the layout of publications to highlight Dr. Rubul
- Adjusted different website pages according to Dr. Rubul’s preferences

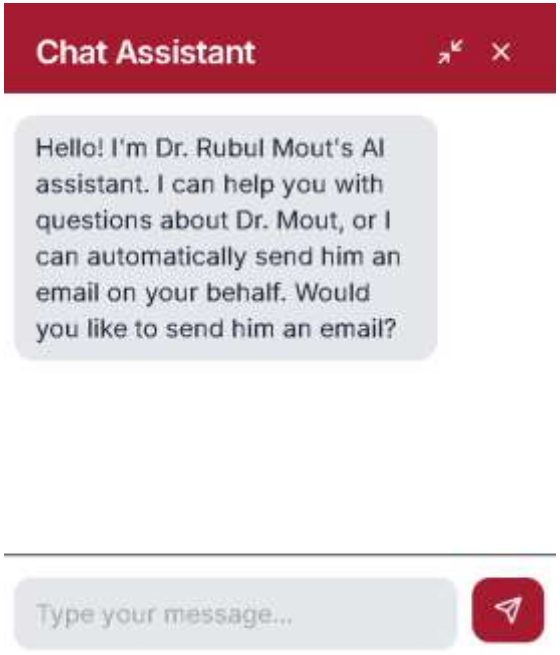
What I learned:

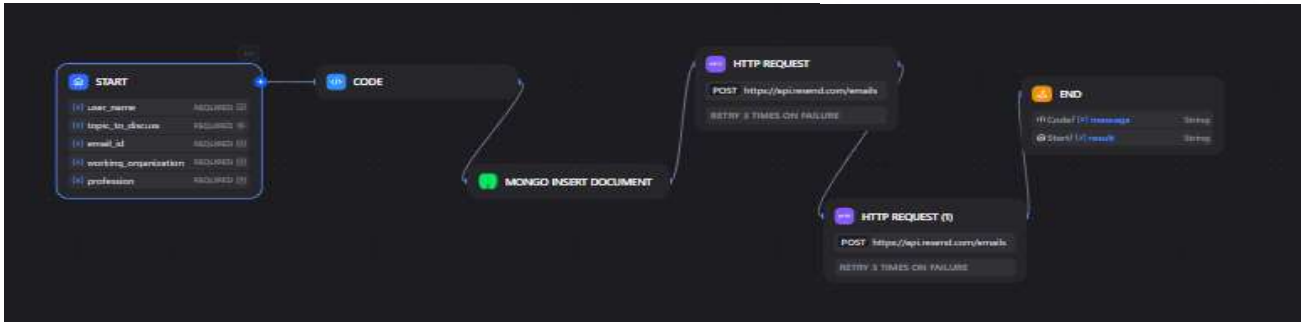
- Experience with resolving issues or creating website portions through vibe coding with the cursor IDE and the Lovable AI
- Deployment of a website through Netlify
- Working and collaborating on a shared project through GitHub
- Importance of effective communication with team members and Dr. Rubul

Andy – What I've built

I did some frontend design, but my main job has been creating a functional AI agent for the website.

- It can answer questions about Rubul, the website, or his research
- It is also able to automatically send him emails with the user's contact information, making him much more accessible to people looking to reach out.





Andy – What I’ve learned

- I’ve learned that AI can be very unreliable but there are ways to work around that.
- A lot of technical work involving the email and chatbot APIs fell into my hands, allowing me to learn from that experience and broaden my understanding of automation and AI agents.
- I’ve learned a lot of practical skills that aren’t taught in normal CS classes

Chloe

What I did

- Generated and added photos
  - Protein design
- Created original design for research page
- Adjusted different elements of the website according to Dr. Rubul's preferences

What I learned

- How to use various tools such as lovable, github, cursor, and etc.
- How to collaborate with others in a project on github

Stella

What I did

- Generated and added photos
  - Homepage background
- Created original design for research cards
- Adjusted different tabs according to Dr. Rubul’s preferences

What I learned

- How to communicate well with team members and the client for more efficiency
- Work on a collaborative project through github
- Design a website using lovable, cursor, and github

Keep in touch

If you are interested in keeping in touch with our program and helping to shape our program going forward, here’s what you can do:

Invite some of your friends to upcoming winter break session. Based on this session’s feedback, we’ll condense it and optimize it so it can fit into 2 weeks.

Volunteer to be team leader or project manager for next session, or we can give you opportunity to explore some more advanced features next time. (We won’t charge you for future sessions)

Find any small business or organizations that need a web app or chatbot developed for free, so they can be potential clients for students to work with.