

# **Web Development**

**Lesson 0**

**Brief intro and computer setup**

**Aug 18, 2024**

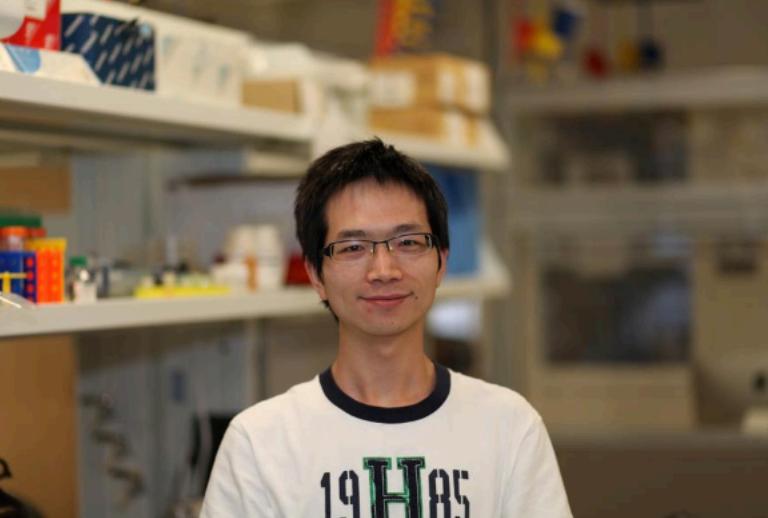
# Self-Introduction

<https://lidaof.github.io/>

Daofeng Li ☺

home team github ↗

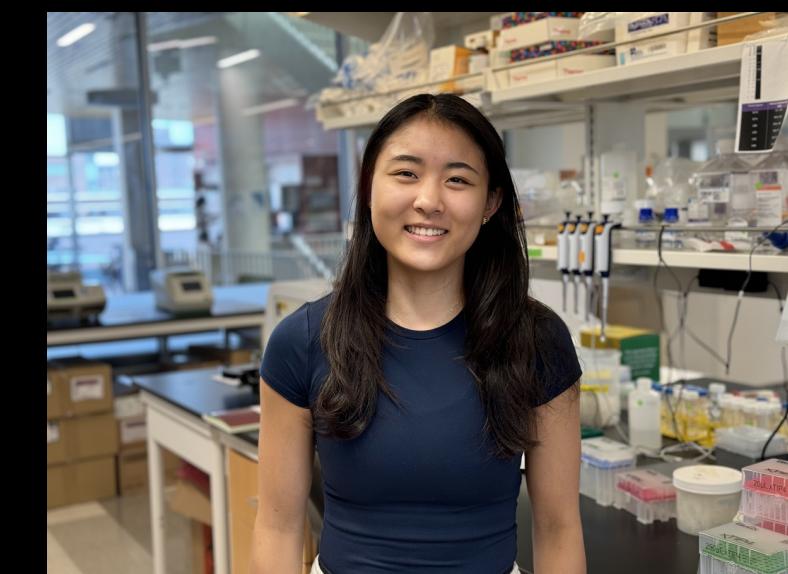
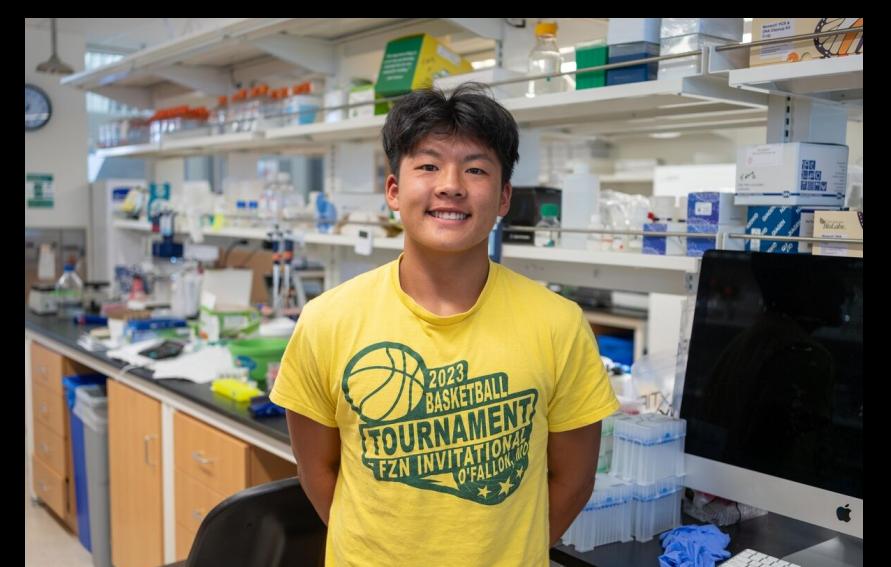
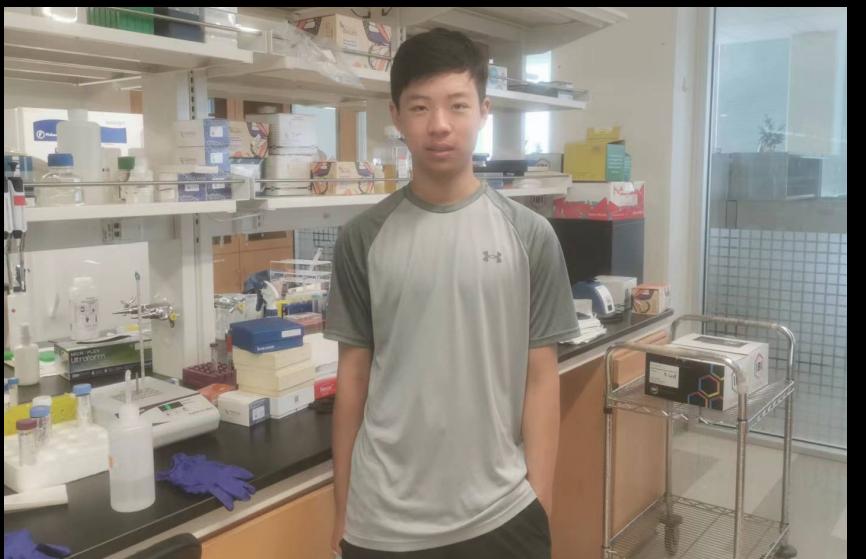
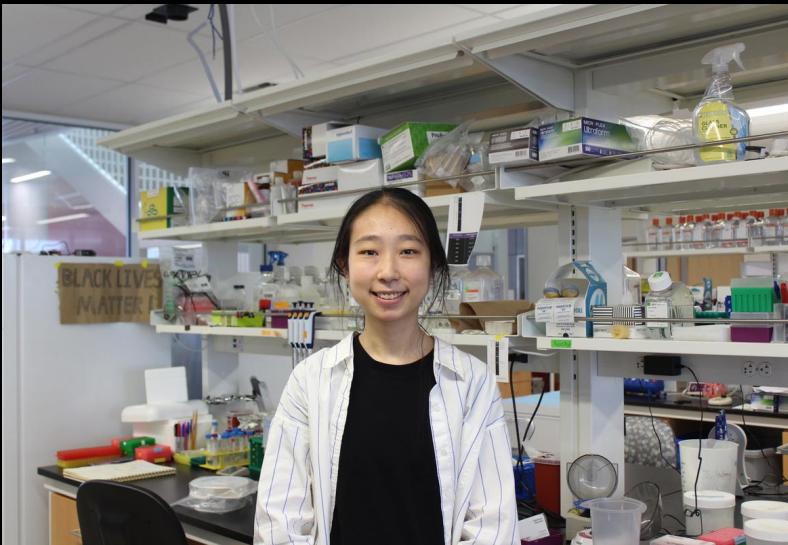
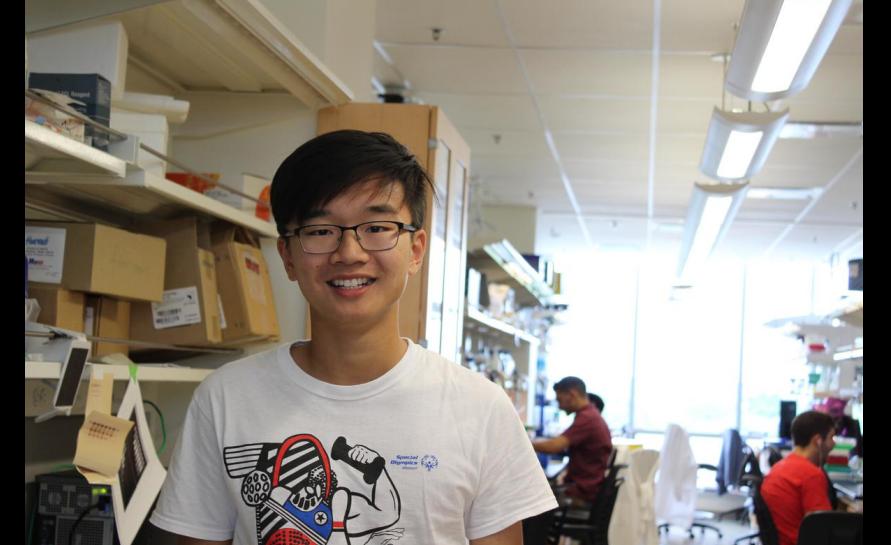
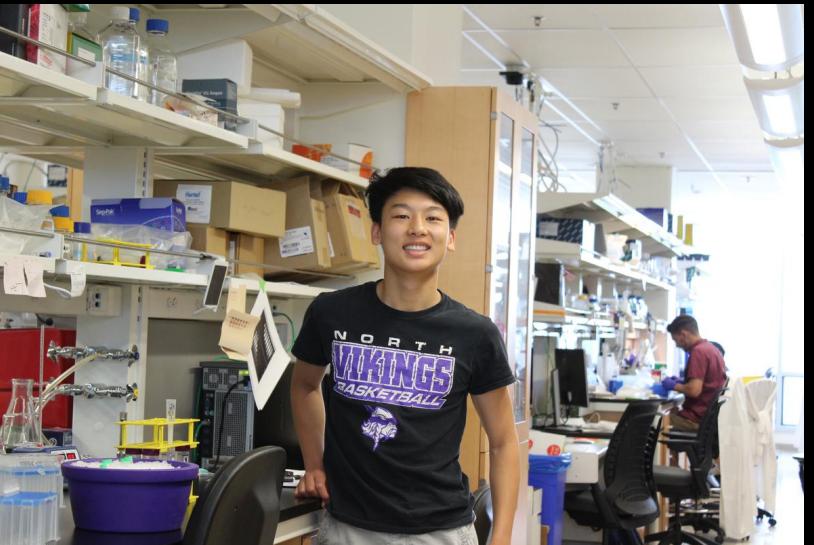
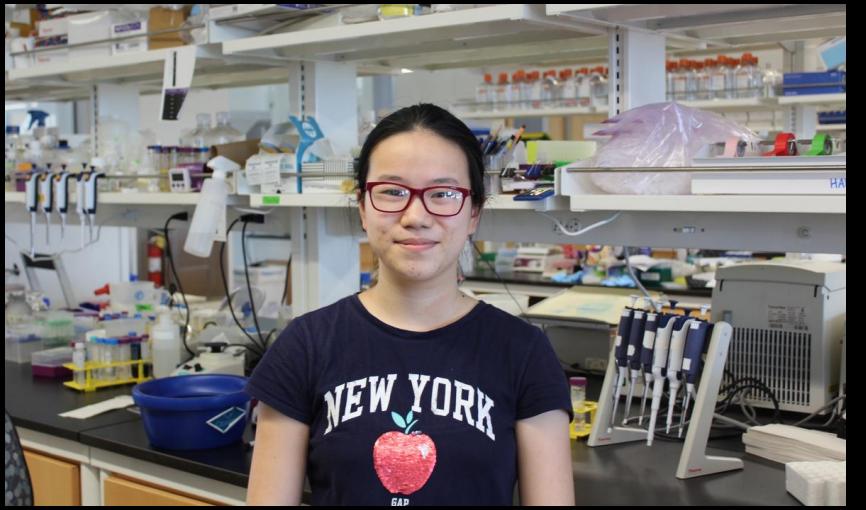
Hello!



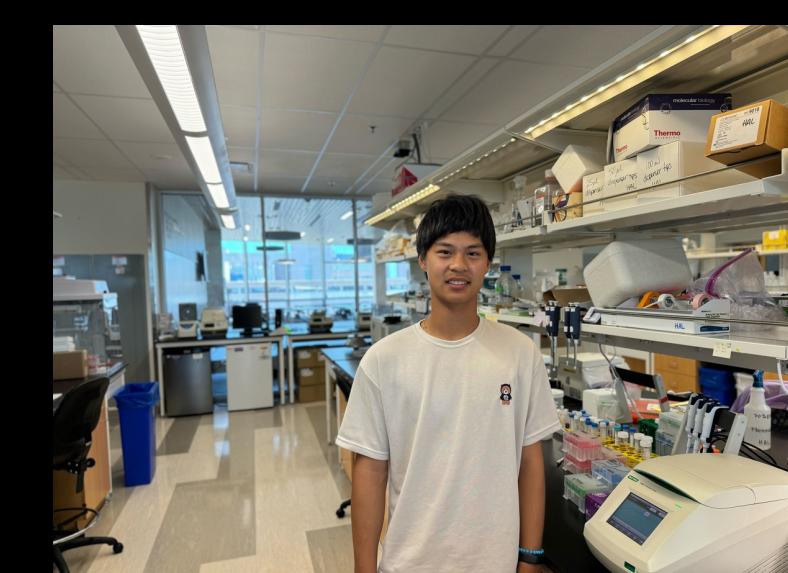
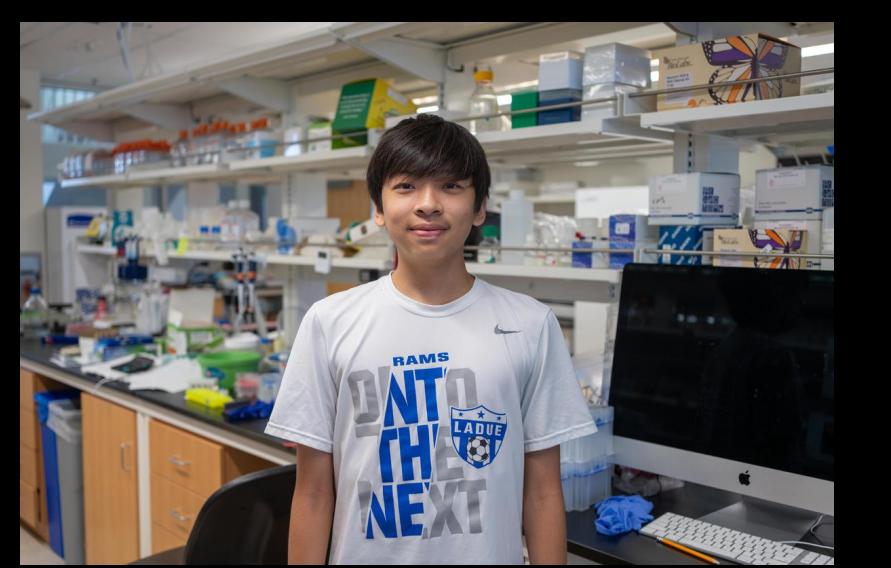
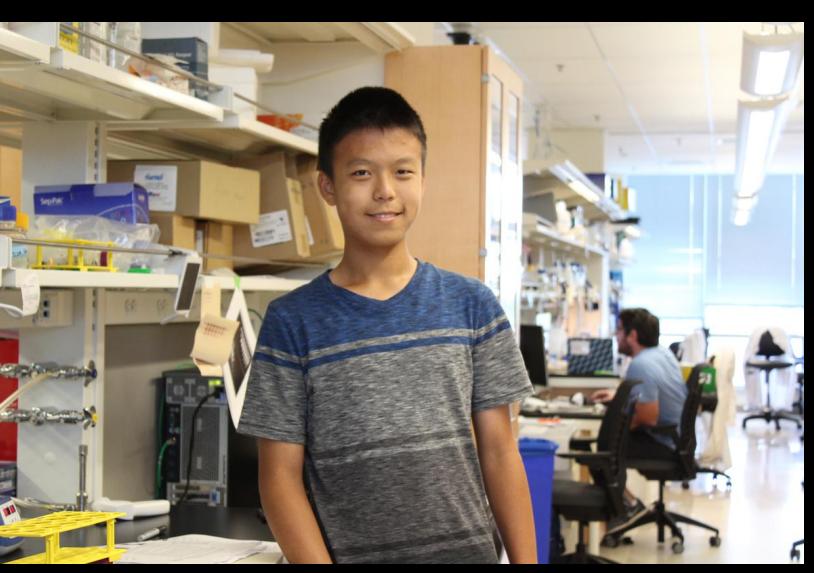
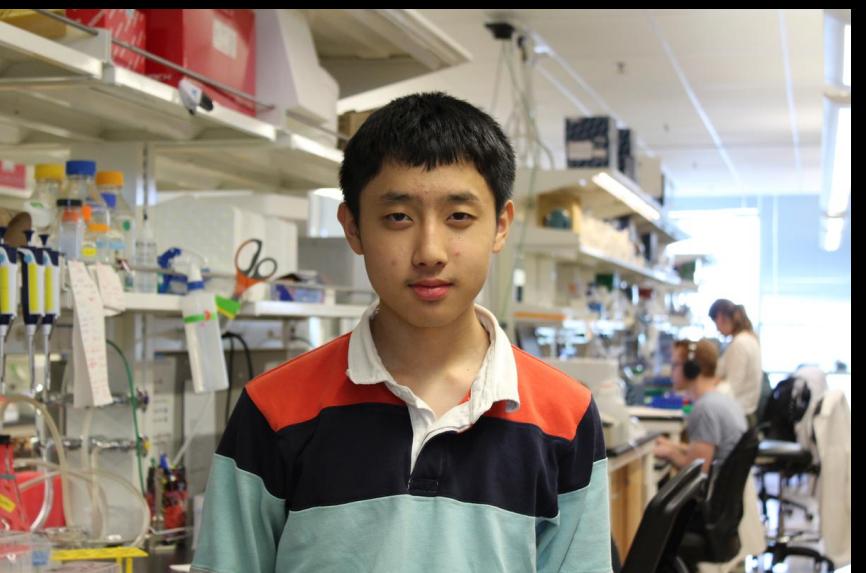
I'm an Assistant Professor in [Ting Wang's lab](#) at [Washington University School of Medicine](#). I obtained my PhD in Bioinformatics from [China Agricultural University](#). I've been the main developer of and is currently the Director of the [WashU Epigenome Browser](#) project. My research focuses on developing modern omics data visualization platforms using latest web technologies to facilitate researchers in understanding biological function.

A complete list of my published work can be found in my Bibliography:  
<https://www.ncbi.nlm.nih.gov/myncbi/1dywlapUv41Qk/bibliography/public/>

# Some students worked with me

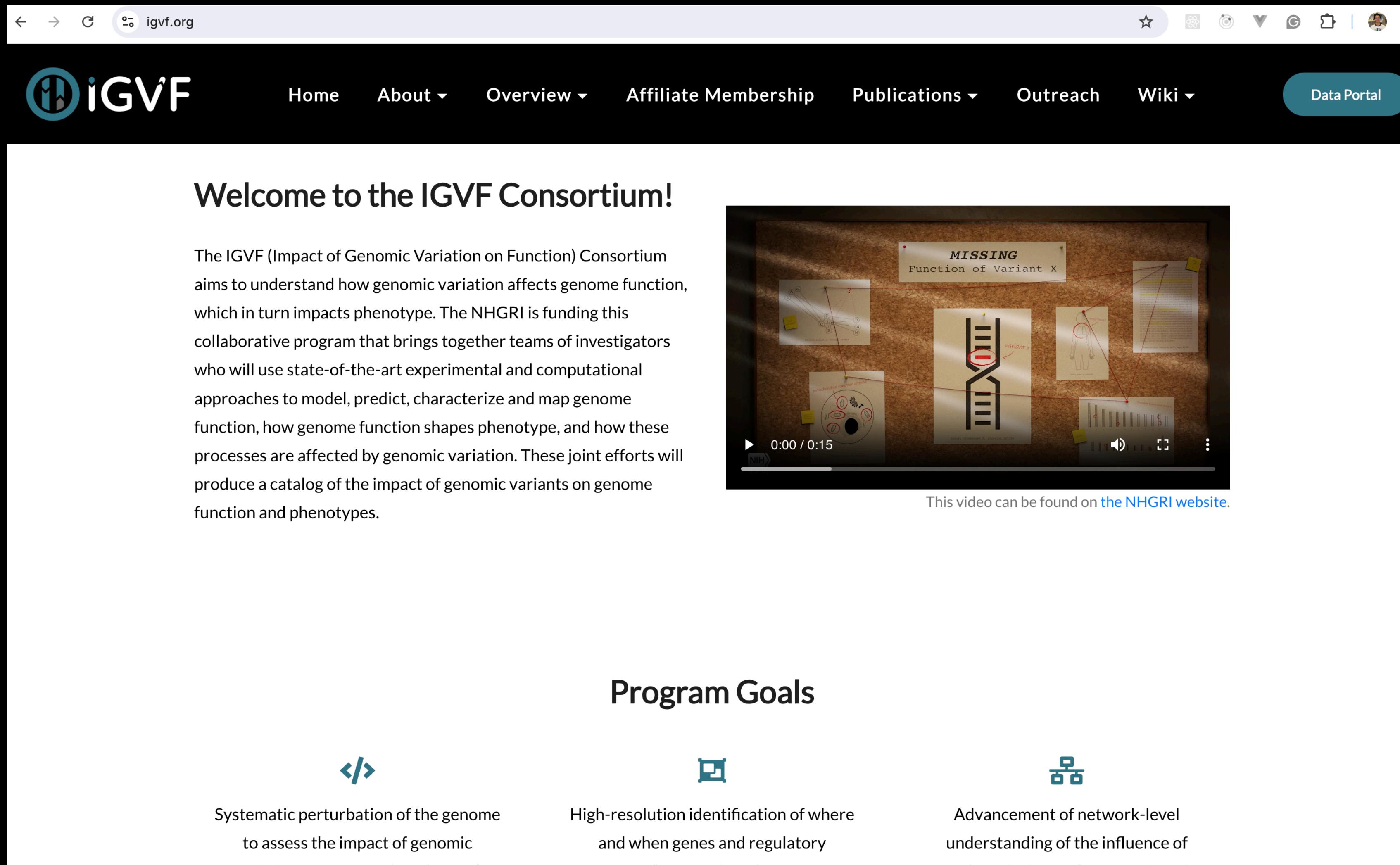


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# Selected websites I (co-)developed

<https://igvf.org/>



The screenshot shows the homepage of the iGVF Consortium website. At the top, there is a navigation bar with links for Home, About, Overview, Affiliate Membership, Publications, Outreach, Wiki, and Data Portal. Below the navigation bar, a video player displays a video titled "MISSING Function of Variant X". The video content shows a corkboard with various notes, diagrams, and a DNA helix, illustrating the search for the function of a specific genomic variant. A progress bar at the bottom of the video player indicates it is 0:00 / 0:15. Below the video, a text block explains the mission of the iGVF Consortium. Further down, there is a section titled "Program Goals" with three items: "Systematic perturbation of the genome to assess the impact of genomic variants", "High-resolution identification of where and when genes and regulatory elements act", and "Advancement of network-level understanding of the influence of genomic variation on phenotype".

igvf.org

iGVF

Home    About ▾    Overview ▾    Affiliate Membership    Publications ▾    Outreach    Wiki ▾    Data Portal

## Welcome to the IGVF Consortium!

The IGVF (Impact of Genomic Variation on Function) Consortium aims to understand how genomic variation affects genome function, which in turn impacts phenotype. The NHGRI is funding this collaborative program that brings together teams of investigators who will use state-of-the-art experimental and computational approaches to model, predict, characterize and map genome function, how genome function shapes phenotype, and how these processes are affected by genomic variation. These joint efforts will produce a catalog of the impact of genomic variants on genome function and phenotypes.

MISSING  
Function of Variant X

0:00 / 0:15

This video can be found on [the NHGRI website](#).

## Program Goals

- </>  
Systematic perturbation of the genome to assess the impact of genomic variants
- █  
High-resolution identification of where and when genes and regulatory elements act
- █  
Advancement of network-level understanding of the influence of genomic variation on phenotype

# <https://smaht.org/>

The screenshot shows the SMAHT Network website (<https://smaht.org/>) displayed in a web browser. The page features a header with the SMAHT logo, navigation links for About, Policies, Publications, News, Wiki, and a Data Portal button. Below the header is a main content area with a "Welcome to the SMAHT Network!" section and a DNA helix graphic with exclamation marks and a play button.

**Welcome to the SMAHT Network!**

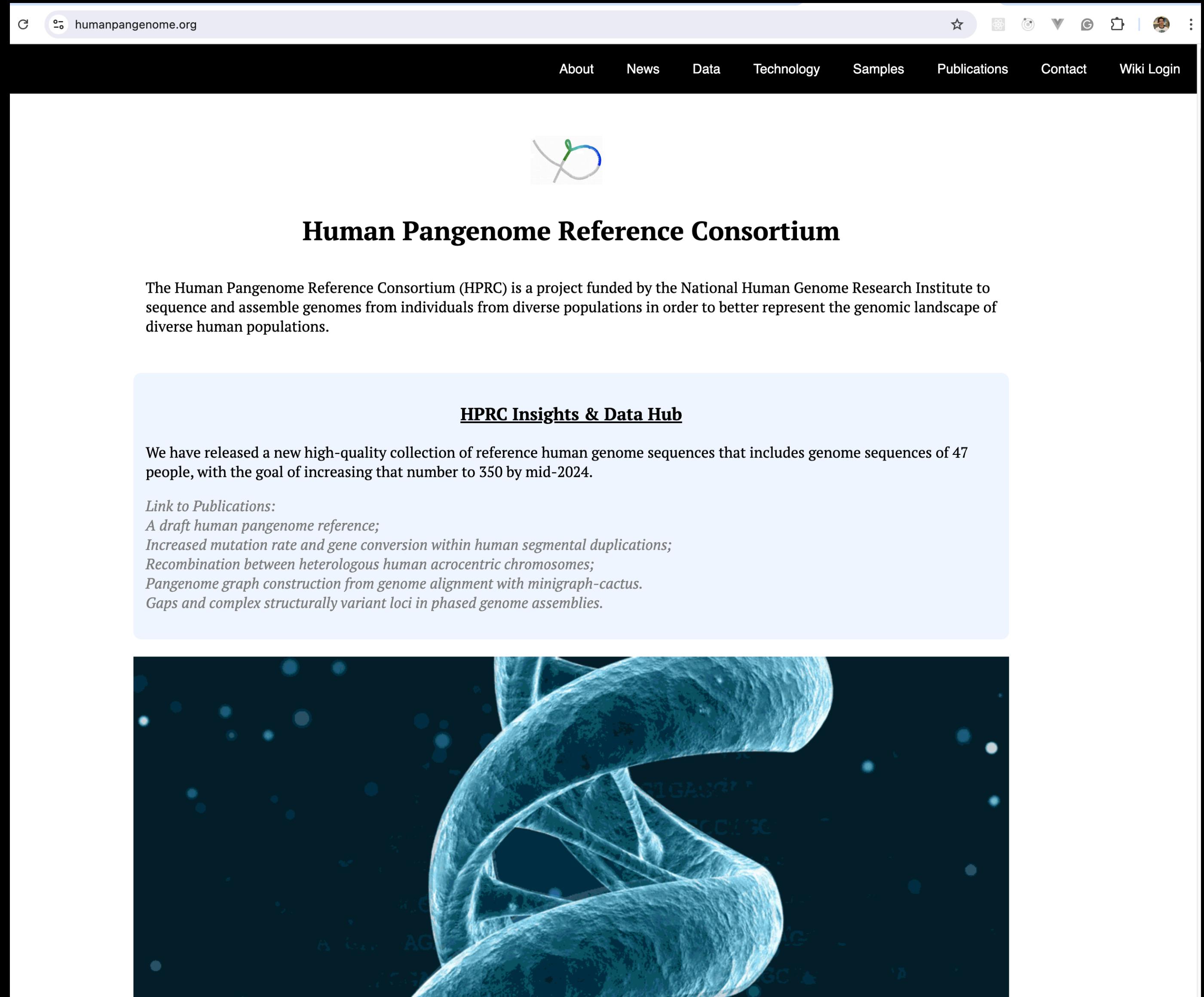
The [Somatic Mosaicism Across Human Tissues \(SMAHT\)](#) is a new initiative sponsored by the National Institutes of Health, Office of Strategic Coordination - The Common Fund. This initiative will investigate somatic variations: DNA changes that occur as our bodies develop, grow, and age, and how these changes impact health and disease. For the first time, scientists will create a large-scale, systematic catalog of somatic variation, providing an invaluable resource for the broader scientific community.

This video can be found on [the NIH website](#).

## Key Outcomes

A catalog of somatic variants in select tissues from diverse human donors	Innovative sequencing tools and analysis methods that optimize variant detection	Fundamentally new ways of understanding the contribution of somatic variation to human biology	A SMAHT data workbench that seamlessly integrates with current tools to study DNA sequences, like genome browsers, and combines analysis of somatic variation with the current human reference genome

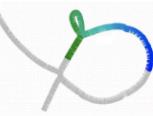
# <https://humanpangenome.org/>



The screenshot shows the homepage of the Human Pangenome Reference Consortium (HPRC) website. The URL "humanpangenome.org" is visible in the browser's address bar. The top navigation bar includes links for About, News, Data, Technology, Samples, Publications, Contact, and Wiki Login. A small logo consisting of a blue and green stylized 'X' or DNA helix icon is positioned above the main title. The main title "Human Pangenome Reference Consortium" is centered in bold black font. Below the title, a brief description states: "The Human Pangenome Reference Consortium (HPRC) is a project funded by the National Human Genome Research Institute to sequence and assemble genomes from individuals from diverse populations in order to better represent the genomic landscape of diverse human populations." A callout box titled "HPRC Insights & Data Hub" contains text about a new collection of reference human genome sequences, mentioning 47 people and a goal of 350 by mid-2024. It also lists several publications. At the bottom of the page is a large, stylized blue DNA helix graphic.

humanpangenome.org

About News Data Technology Samples Publications Contact Wiki Login



## Human Pangenome Reference Consortium

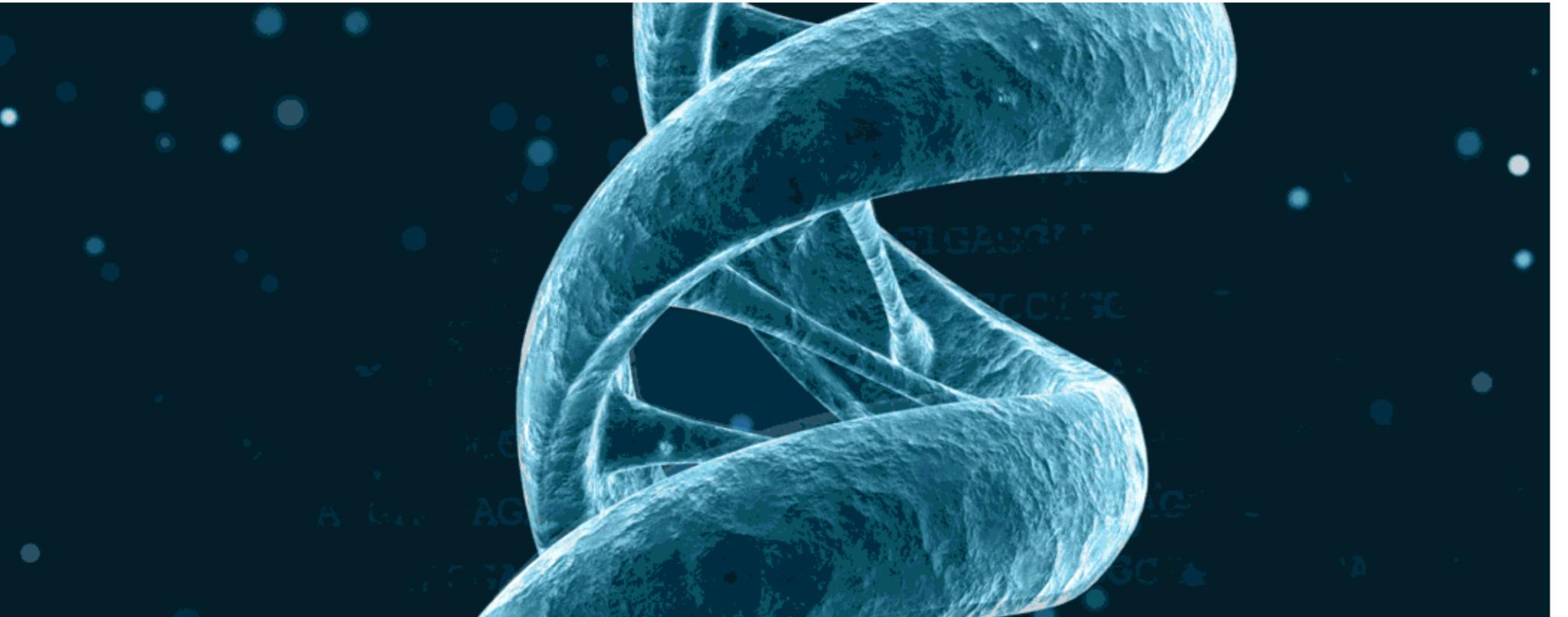
The Human Pangenome Reference Consortium (HPRC) is a project funded by the National Human Genome Research Institute to sequence and assemble genomes from individuals from diverse populations in order to better represent the genomic landscape of diverse human populations.

**HPRC Insights & Data Hub**

We have released a new high-quality collection of reference human genome sequences that includes genome sequences of 47 people, with the goal of increasing that number to 350 by mid-2024.

*Link to Publications:*

*A draft human pangenome reference;*  
*Increased mutation rate and gene conversion within human segmental duplications;*  
*Recombination between heterologous human acrocentric chromosomes;*  
*Pangenome graph construction from genome alignment with minigraph-cactus.*  
*Gaps and complex structurally variant loci in phased genome assemblies.*



<https://epigenome.wustl.edu/EyeEpigenome/>

Epigenomics in the Eye

Click the colored text labels to choose cell types, then choose the assay types from the selection below.

**Eye Anatomy**

The diagram shows a cross-section of the eye with labels for the Retina, Macula, and RPE. A dashed box highlights the Retina area, which is expanded into a detailed diagram of retinal layers and cell types. The expanded diagram includes labels for RGC (Retinal Ganglion Cell), Gly\_amacrine, OFF\_cone\_bipolar, ON\_cone\_bipolar, Microglia, Cones, Rods, Muller\_glia, Horizontal, Rod bipolar, GABA\_amacrine, All\_amacrine, and Astrocyte. The RPE layer is also labeled.

**Selected Cell types**

- Fibroblasts**  
Select the data you want to display
  - ATAC
  - RNA
  - Hi-C
  - Methylation
- Pericytes**  
Select the data you want to display
  - ATAC
  - RNA
  - Hi-C
  - Methylation
- Schwann**  
Select the data you want to display
  - ATAC
  - RNA
  - Hi-C
  - Methylation

**Visualize**

# <https://www.artndesign.net/>

The screenshot shows the homepage of the [Academy of Art and Design](https://www.artndesign.net/). The header features a green banner with the text "We are open for in-person PRIVATE lessons! [Email](#) or [call us](#) for inquiries!". Below this is a dark blue navigation bar with the Academy logo, links for Event, Programs, Instructors, Showcase, Shop, About, FAQ, More, a shopping cart icon (0 items), and Log In. A large, colorful illustration of a bear riding a bicycle and a girl dancing in a landscape serves as the background for the main content area. A search bar is located below the illustration. The main heading "Our Mission" is displayed in a large, bold, teal font. To the left of the text is a circular photo of a group of students holding framed certificates in front of a "HAPPY HALLOWEEN" banner. The mission text includes a paragraph about the founders' love for the community and their dedication to art education, followed by a quote from Nelson Mandela. A section titled "WHY CHOOSE US?" is also present. The footer features a teal header "Featured Programs" and four colored boxes: yellow ("Zoom Classes"), red ("Creative Play Studio"), blue ("Take Home Projects"), and green ("Community Benefit Program").

We are open for in-person PRIVATE lessons! [Email](#) or [call us](#) for inquiries!

ACADEMY OF ART AND DESIGN Event Programs Instructors Showcase Shop About FAQ More Log In

Search...

Group Lessons Private Lessons Summer Camps Community Benefit Programs Creative Play Studio Why Us Take Home Projects

## Our Mission

 Our founders moved to Grand Rapids years ago and fell in love with this community who value art as an essential part of life.

This is the place where we want to touch people by creating art. This is also the place that we want to touch people by their heart. We are dedicated to design and create art and Chinese classes with our individual students' growth in mind. Together, we will grow with the local community as a whole.

"Art creates life; art inspires life; art saves life." We believe art touches everybody's life in one way or another. Life is filled of possibilities because of art.

### WHY CHOOSE US?

## Featured Programs

Zoom Classes Creative Play Studio Take Home Projects Community Benefit Program

# SLMCS library book catalog

The screenshot shows a library search results page for the St. Louis Modern Chinese School (SLMCS). The header features the school's logo and name in English and Chinese. A large banner image of the school building is visible. The search bar at the top contains the placeholder "搜索书籍...". Below the search bar, the text "圣路易现代中文学校图书馆" is displayed. The search results are categorized by type: 筛选 (Filters), CHINESE LANGUAGE, CHILDREN'S STORIES, and BOOKS. Each category displays several book covers with titles like "Three Hundred Song Poems (With Pinyin)", "Harvest Intermediate Chinese", "Experiencing Chinese Writing Course (Zhong Ji 2)", and "清明节". The left sidebar lists various filters for categories such as Chinese language, Learning Material & Coursework, and Children's stories. The bottom section shows more book covers with titles like "Disney LEARNING 我会自己读" and "做个机器人 假装是我". The overall layout is clean and organized, designed for easy navigation through the library's collection.

# A useful skill may get you additional \$

fiverr.com/categories/programming-tech/website-development?source=hplo\_subcat\_first\_step&pos=1

## Website Development

Create, build, and develop your website with skilled website developers | [How Fiverr Works](#)

Service options ▾ Seller details ▾ Budget ▾ Delivery time ▾ Pro services

Sort by: Best selling ▾

160,000+ results

Ad by Pankaj Maur... Top Rated ⚡⚡⚡  
I will create shopify dropshipping store, build shopify website design, redesign  
★ 5.0 (423) From \$325 Offers video consultations

Ad by P J Level 2 ⚡⚡  
I will do shopify website design, shopify redesign, dropshipping store, shopify...  
★ 5.0 (115) From \$105

Ad by Safyan N Pro  
I will build responsive professional wordpress website design or blog...  
★ 5.0 (480) From \$105 Offers video consultations

Ad by Gleniis Level 1 ⚡⚡  
I will design your website xxxhighendxxx  
★ 4.9 (280) From \$100

Abdullah A. Fiverr's Choice  
I will develop a top notch website with expert web development services

Livia Case Top Rated ⚡⚡⚡  
I will create high selling shopify dropshipping store website with...

Torikul Islam Level 1 ⚡⚡  
I will be full stack web developer software developer PHP laravel html...

Ramiz S. Top Rated ⚡⚡⚡  
I will create wordpress website design and development

# Existing tools without coding

- Wordpress
- Wix
- Webflow
- Squarespace
- Google sites
- ...

**understand how it  
works behind the  
scenes**

**Why we need to learn coding for web development then?**

# Course outline

- HTML basics
  - the contents
- CSS basics
  - the decorations
- JavaScript basics
  - the behaviors

The screenshot shows a web browser displaying the course page for 'HTML + CSS Basics' on the ultimatecourses.com website. The page includes the course title, a thumbnail image, lesson count (59 lessons), duration (5 hours), and a 5/5 rating with 2163 reviews. A 'Start Course →' button is visible in the top right. To the right, a 'Web Developer Bundle' is promoted, featuring three courses: 'HTML + CSS Basics', 'JavaScript Basics', and 'JavaScript DOM'. Each bundle card shows its name, lesson count, duration, and a discounted price (e.g., \$129 instead of \$189). An 'ADD TO CART' button is present at the bottom of each bundle card.

HTML + CSS Basics  
59 lessons • 5 hours • ★★★★★ 5/5 (2163 ratings)

Start Course →

Web Developer Bundle

HTML + CSS Basics  
59 lessons • 5 hours

JavaScript Basics  
66 lessons • 9 hours

JavaScript DOM  
47 lessons • 7 hours

How many users?

\$129  
\$189 Save 32%

ADD TO CART

EU customers: price excludes VAT

How many users?

\$149  
\$258 Save 42%

ADD TO CART

EU customers: price excludes VAT

hands on  
session

**Sign up a GitHub id  
Join the GitHub classroom**

**Download and install visual studio code  
sign in using GitHub id**

**Command line interface usage (if time permits)**

# Live server extension for VS code

