AI Boot Camp

AI for Clinical Care: Beginner Track

April 19, 2023 @ Lake Nona

A PATIENT-FOCUSED CHORUS FOR EQUITABLE AI

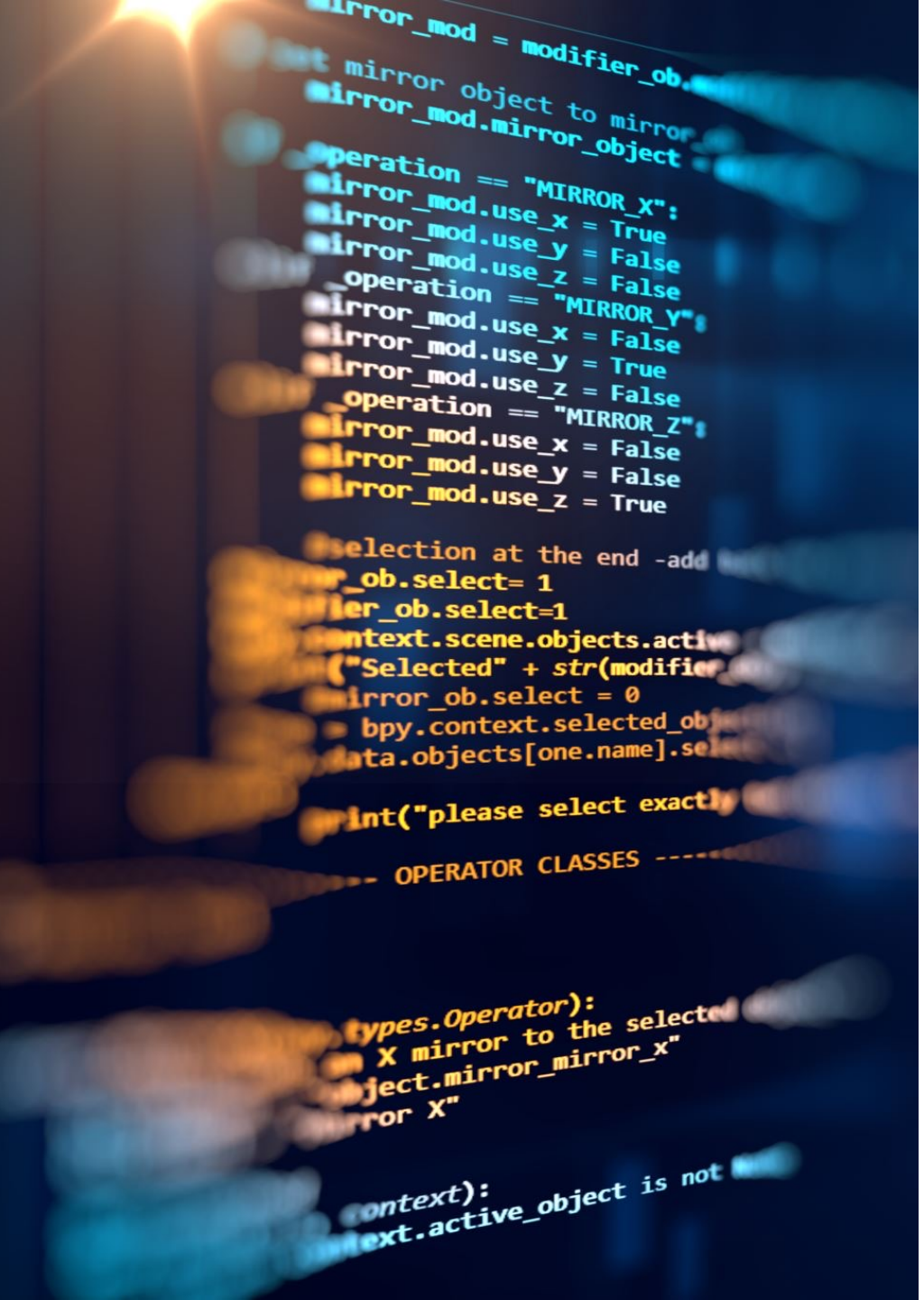
The academic infrastructure for hospital AI sponsored by the NIH Bridge2AI

UF College of Medicine UNIVERSITY of FLORIDA

INTELLIGENT CRITICAL CARE CENTER UNIVERSITY OF FLORIDA

Introduction

- This beginner-level workshop will introduce the fundamentals of **applied artificial intelligence** for medicine and clinical care.
- **AI as a tool:** No math! Instead, we'll focus on guided Python coding.
- Coding exercises are aimed at novice programmers.
- Combination of **interactive experiential learning** and **guided vignettes** from medical AI experts.
- All material is available after the workshop.
- **Our goal is to equip you with the foundations and tools for continued medical AI experimentation and learning.**



Learning Objectives

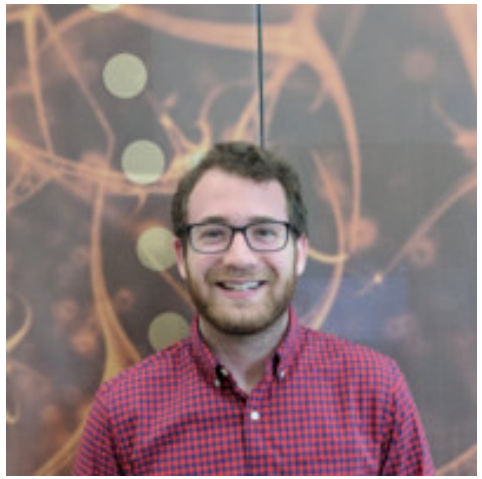
- **Create** a Jupyter notebook and **write + execute** Python code.
- **Demonstrate** understanding of fundamentals coding concepts like variables, libraries, comments, and functions.
- **Apply** Python for loading, analyzing, manipulating, and visualizing biomedical datasets.
- **Transform** raw healthcare data into AI/ML-ready datasets.
- **Develop and evaluate** popular machine learning models to predict clinical outcomes from real-world patient data.
- **Describe** the ways in which AI is being used for medical imaging, multi-omics, digital pathology, and natural language processing.

Schedule

Time	Module	Instructor
8:30 AM - 9:30 AM	Brief Introduction to Python	Joseph Cox
9:30 AM - 10:30 AM	Biomedical Data Analysis	Scott Siegel
10:30 AM - 10:45 AM	Break	
10:45 AM - 11:45 AM	Machine Learning with Patient Data	Ricardo Diaz-Rincon
11:45 AM - 12:00 PM	Spotlight: Artificial Neural Networks	Scott Siegel
12:00 PM - 1:30 PM	Lunch	
1:30 PM - 2:20 PM	AI with Medical Imaging	Wei Shao, PhD
2:20 PM - 3:10 PM	AI with Multi-Omics	Kiley Graim, PhD, Tina Salehi Torabi, Leslie Smith
3:10 PM - 3:20 PM	Break	
3:20 PM - 4:10 PM	AI with Pathology	Pinaki Sarder, PhD
4:10 PM - 5:00 PM	AI with Medical Text	Aokun Chen, PhD

UF Instructor Spotlight: PhD Students

Tina Salehi Torabi, BS
PhD Student
Computer Science



Joseph Cox, BS
PhD Student
Biomedical Engineering

Leslie Smith, BS
PhD Student
Computer Science

Scott Siegel, MS
PhD Student
Biomedical Engineering

Ricardo Diaz-Rincon, BS
PhD Student
Neuroscience

UF Instructor Spotlight: AI Faculty and Postdocs

Wei Shao, PhD
Assistant Professor
Medicine (Quantitative Health)

Kiley Graim, PhD
Assistant Professor
Computer Science

Pinaki Sarder, PhD
Associate Professor
Medicine (Quantitative Health)

Aokun Chen, PhD
Postdoctoral Research Fellow
Biomedical Informatics

Benjamin Shickel, PhD
Assistant Professor
Medicine (Quantitative Health)

Participants

Interactive Python Coding

- Today's hands-on activities will use **Jupyter notebooks**.
- At any time today, feel free raise your hand for individual support or questions.
- Let's get started!

github.com/gatorai/aicc23