Agenda

1. Intro to Julia
2. Julia at DataCamp
3. Open Discussion
An introduction to Julia
What is Julia?

Julia is a new general purpose programming language often utilized for:

- Data science
- Scientific computing
- Machine Learning
Julia was developed in 2012 by a group of Data Scientists to be a fast and easy to learn general purpose programming language.

Julia was developed to have the speed of C, the dynamism of Ruby, the practicality of Python, that can do statistics like R, and numerical analysis like MATLAB.
Julia is most known for:

1. **Numerical Analysis**
2. **Data Visualization**
3. **Machine Learning**

Source: Numerical Analysis
Data Visualization
Machine Learning
Benefits of Julia

- **Speed**: For a single core, Julia is ~5x faster than Python. With multithreading, it can be over 20 times faster.

- **Syntax**: Julia reads more like English, and it is more expressive and cleaner than Python.

- **Functional Broadcasting**: Julia easily enables functions to work on arrays.

These benefits mean that Julia can solve problems faster and more effectively than other languages. It is great for computational complex problems, but because of its ease of use, it is effective for everyday coding as well.
Additional Reasons to Learn Julia

**Julia Keeps everything in Julia**

Julia is a fast processing language, so there is no need to outsource code to other languages (like C++).

It is easier to put code into production because there is not a need to rewrite the slow (Python or R) model into C++.

Coding into Julia means it goes directly to production.

**Resume Builder!**

For data scientist and analytics professionals looking for a new role, it is a great way to signal potential employers that you are willing to stay up-to-date by investing in an emerging language.

Knowing Julia helps to get ahead of the curve!

**Evolve culture and talent**

Learning a new program language often times will keep advanced and curious data science and analytics teams engaged.

This also offers an opportunity to find efficiencies in ways of working as Julia is much quicker than other coding languages.

**Julia has great interconnectivity**

Julia is an open-source tool and can be installed for free. It also has an active development community that can be utilized for support.

Julia connects well with Python, R, C++, or other languages.

It enables many new coding features such as GPUs and parallel computing.
Even though Julia is relatively new, many large, well-known companies worldwide are using it.
Julia is rapidly emerging, still small compared to Python/R

Source: Stack Overflow
Introduction to Julia

- Launched on October 10
- No prerequisites
- Similar style of course compared to Intro to Python or R
DataCamps
Long-term Julia Plans

Julia Track:

1. Introduction to Julia - *Launched*

2. Intermediate Julia *(in development, Q1 2023)*

3. Data Manipulation in Julia *(planned, Q2 2023)*

4. Data Visualization in Julia *(planned, Q2 2023)*

5. Machine Learning with Julia *(planned, Q3 2023)*
Other Julia Content

- Introduction to Julia Practice Pool – November 2022
- Julia projects in workspace – Q1 2023
Discussion