risecamp
UC Berkeley

**Thursday, October 11 and Friday, October 12, 2018**

International House, UC Berkeley

RISE Camp is a bootcamp organized by the UC Berkeley RISELab where you can get exposure to research and hands-on experience with systems and technologies for emerging AI applications including reinforcement learning, prediction serving, agile ML development, context management, and AI security. Please check this page for all updates on the curriculum, slides, links to resources, and more.

GENERAL REGISTRATION is now open! A limited number of tickets are available here at $500 each.

LIVE STREAMING LINK: https://www.youtube.com/c/UCBRISELab/live

Questions? Please email: risecamp@cs.berkeley.edu
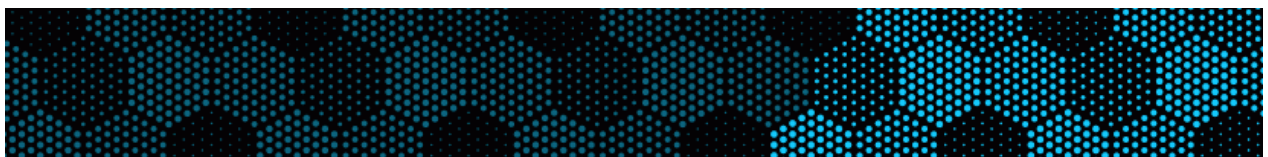
LATEST UPDATES

September 13, 2018: General registration is now open for RISE Camp 2018! We are offering a very limited number of tickets at $500 price. Past events have sold out quickly, so please act fast! Registration link can be found here.

Prerequisites for attending are listed here. The focus of this event will be on the hands-on exercises and tutorials. The ideal attendee will be a practitioner and/or engineer who will be using our software with maybe some project management background as well.

Note: this event will also be live streamed and video archived on YouTube for free (we will provide links on the RISE Camp website in the weeks to come)

Register now to attend in-person at UC Berkeley!
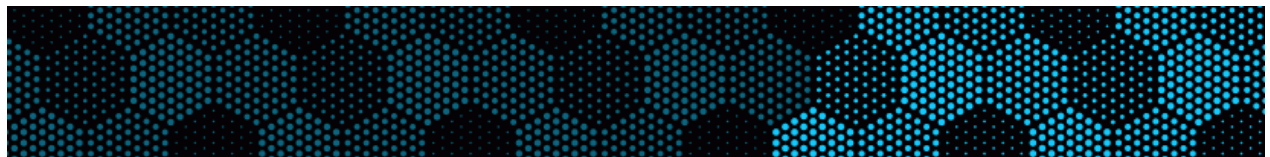
Agenda

DAY 1 – THURSDAY, OCTOBER 11, 2018

Theme: Systems support for Emerging AI applications

- *8:00AM: Breakfast*

- **8:45AM: Lab Introduction/Overview [Ion Stoica]**
- **9:00AM: Tutorial overview [Ionel Gog]**
- **9:15AM: Ray: Distributed Execution Framework for Emerging AI Applications**

  - **9:15 – 9:45AM: Ray Talk [Phillip Moritz]**
  - **9:45 – 11:00AM: Ray Tutorial Lab**
- *11:00AM: Break*
- **11:30AM: RLlib: Ray Reinforcement Learning Library**
  - **11:30 – 11:45AM RLlib Talk [Eric Liang]**
  - **11:45 – 12:45PM RLlib Tutorial Lab**
- *12:45 – 1:45PM: Lunch*
- **1:45 PM: Tune: Hyperparameter search**
- **1:45 – 2:00PM Tune Talk [Richard Liaw]**
- **2:00 – 3:00PM Tune Tutorial Lab**
- **3:00PM: Clipper: a Low-Latency Online Prediction Serving System**
  - **3:00 – 3:30PM: Clipper Talk [Simon Mo]**
  - **3:30 – 4:30PM: Clipper Tutorial Lab**
- *4:30PM: Break*
- **5:00PM: ML in Context: Preserve, Share, and Analyze Experiments with Flor**
  - **5:00-5:30PM: Flor Talk [Rolando Garcia]**
  - **5:30-6:30PM: Flor Tutorial Lab**
- *6:30 – 9:00PM: Reception*

DAY 2 – FRIDAY, OCTOBER 12, 2018

Theme: Data Analytics and Security

- *8:00AM: Breakfast*
- **9:00: Tutorial Overview [Chia-Che Tsai]**
- **9:15AM: PyWren: Pushing Microservices to Teraflops**
  - **9:15 – 9:45AM: PyWren Talk [Eric Jonas]**
  - **9:45 – 10:45AM: PyWren Tutorial Lab**
- *10:45AM: Break*
- **11:15AM : Opaque: Secure analytics on SparkSQL**

- **11:15 – 11:45AM : Opaque Talk [Ankur Dave]**
  - **11:45 – 12:45AM: Opaque Tutorial Lab**
- *12:45 - 2:00PM: Lunch*
- **2:00PM: WAVE: Global-scale Authorization for IoT without an Authority**

  - **2:00 – 2:30PM: WAVE talk [Michael Andersen]**
  - **2:30 – 3:30PM WAVE Tutorial lab**
- **3:30PM:Integrated tutorial: Ray+Clipper+Flor+WAVE**
- **4:30 – 4:45PM Concluding remarks [Raluca Popa]**
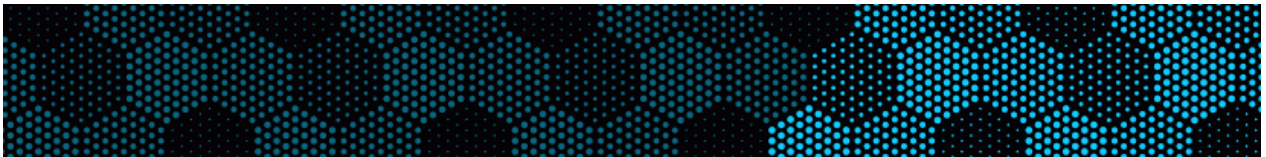
FAQs

What are the prerequisites for attendees of the RISE Camp?

- Experience programming in Python in notebook environment
- Basic understanding of AI/ML concepts (e.g., training, validation, linear models)
- Laptop (with charger) and "modern" browser (Firefox, Chrome, Safari etc. – for technical details, please go to this link)
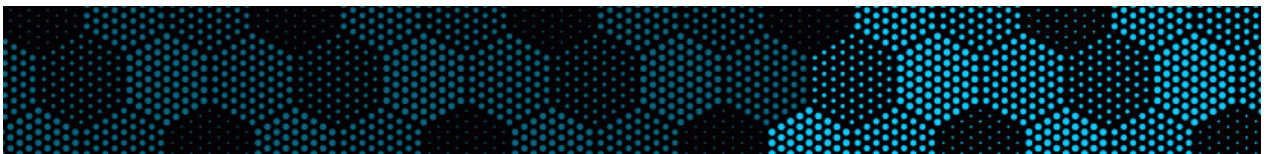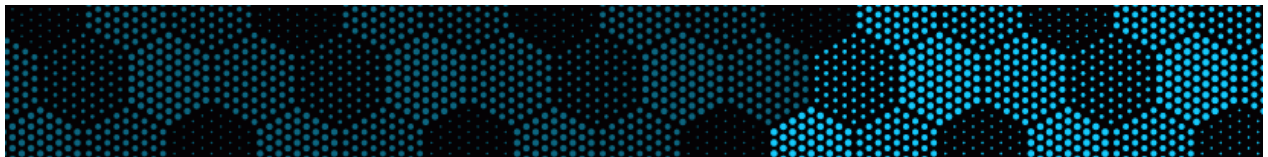
Logistics

Venue: RISE Camp 2018 will be held at International House at UC Berkeley campus. Directions, parking and transportation options can be found here.

Questions? Please email: risecamp@cs.berkeley.edu

Tutorials

Links to hands-on tutorials will be made available during RISECamp on October 11 and 12. Please check back later.

Recommended reading

For WAVE:

https://en.wikipedia.org/wiki/Public-key_cryptography

For Opaque:

Scala:

https://www.artima.com/scalazine/articles/steps.html (First Steps to Scala)

Please read up to step 4.

Spark's DataFrame API:

https://spark.apache.org/docs/latest/sql-programming-guide.html (Spark Offical Docs)

Please read up to the section "Untyped Dataset Operation (aka DataFrame Operations)