

VIDEO



# WYLIODRIN STUDIO: FROM PROTOTYPING TO SMALL-SCALE DEPLOYMENT

**Ioana Culic,**  
Teaching Assistant,  
Politehnica University of Bucharest

**Cosmin Daniel Radu,**  
Teaching Assistant,  
Politehnica University of Bucharest





## VIDEO



## SLIDES

# From Prototyping to Small-Scale Deployment

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

>> Hello, and to thank you Jim for the introduction. Today we are going to talk about Wylidrin Studio. A platform that helps you build prototypes and



Copyright © 2020

[Show/Hide Header](#)



## VIDEO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley DRLab and then led the ASDIOLab

## SLIDES

## Who we are



### Ioana Culic

Teaching Assistant  
Politehnica University of Bucharest

10+ years of experience in Software Engineering



### Cosmin Radu

Senior Year Student  
Politehnica Bucurest

Undergraduate TA  
4+ years Linux and development experience

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

>> Hello, and to thank you Jim for the introduction. Today we are going to talk about Wylidrin Studio. A platform that helps you build prototypes and turn them into small-scale deployments. We started off with some quick words about us. We are Ioana



Copyright © 2020

[Show/Hide Header](#)





## VIDEO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Dair Lab and then led the ASDIDE lab

## SLIDES

## Software (and connected devices) will be all over



## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

prototypes and turn them into small-scale deployments. We started off with some quick words about us. We are Ioana and Cosmin at the University of Bucharest. I have been working with technologies for the last seven years. Cosmin is my student and he has been building applications during the last three years. A little bit about the context, so we are all aware that objects around us have become smart.

Copyright © 2020

[Show/Hide Header](#)



## VIDEO

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Per Lab and then led the ASDIOLab

## SLIDES

## Everybody will need some kind of CS knowledge



## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

applications during the last three years. A little bit about the context, so we are all aware that objects around us have become smart. We have refrigerators, vacuum cleaners connected to the Internet and running software. In this context we have fields such as mechanics relying more on more on applications being built and software being deployed.



Copyright © 2020

[Show/Hide Header](#)



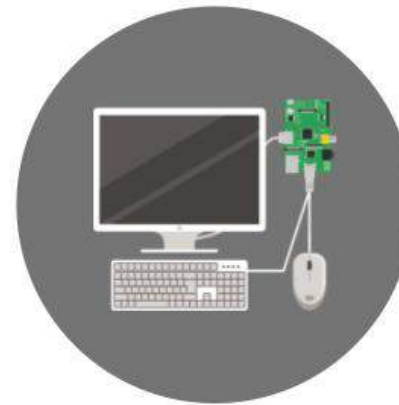


## VIDEO



## SLIDES

## What about connected devices? Raspberry Pi



### Easy to use?

yes, as a  
computer, screen  
and keyboard

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab.

## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

computers, and we have a very good example. They aim to be on prototyping, targeting people who are not computer specialists, and as we can all see, it succeeded in doing this. However there been some limitations and this is why in many of the device is devices nowadays we can find raspberry Pi devices. These are computers and they are really easy to use when you connect them to a



Copyright © 2020

[Show/Hide Header](#)



## VIDEO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018

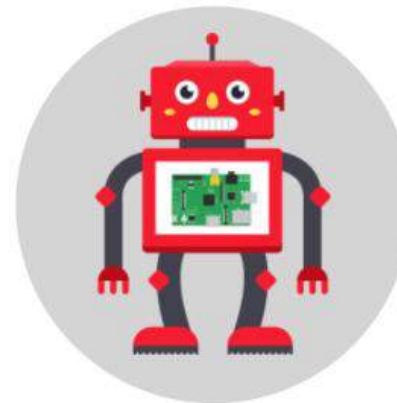


**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley DASH and then led the ASDIDE lab

## SLIDES

## What about connected devices? Raspberry Pi Robots



### No simple tools

- ssh knowledge
- linux CLI knowledge
- deploying code is non trivial

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

can find raspberry Pi devices. These are computers and they are really easy to use when you connect them to a screen or keyboard. Things get trickier when you connect them inside of the robot or place them on top of a building. In this case, usually what you would do is to connect a model to it, SSH,



Copyright © 2020

[Show/Hide Header](#)





## VIDEO

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Dair Lab and then led the ASDIDE lab

## SLIDES

It is (sometimes) easy for geeks



What about non-geeks?



## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

connect a model to it, SSH, and interface, and when it comes to actually deploying code on the device, things can get trickier. And well for people who are into computers and programming, this can be just fun and another challenge. If we think about students, they want to build some fine arts projects or mechanical stuff, this can get intimidating and will stop them from actually building the products that they want to

Copyright © 2020

[Show/Hide Header](#)



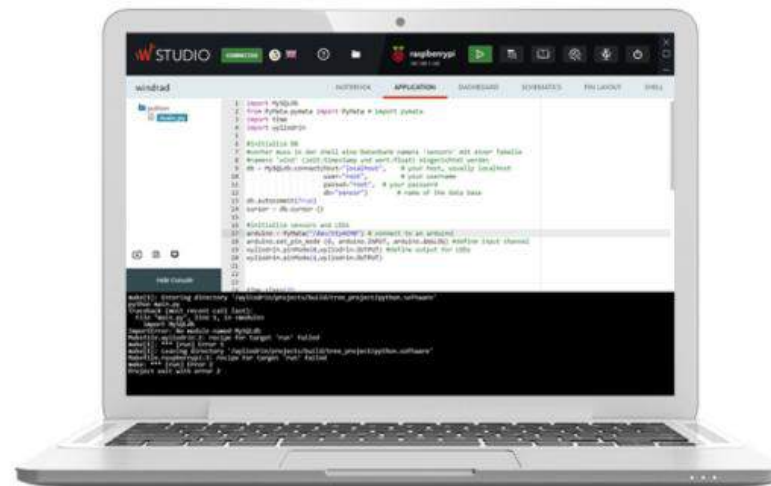


## VIDEO



## SLIDES

## Wylodrin STUDIO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIOLab

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

some fine arts projects or mechanical stuff, this can get intimidating and will stop them from actually building the products that they want to build. As a result we created Wylodrin Studio, a project that aims to help experience and not experience people and building applications. Further on I would like Cosmin to describe the interface a



Copyright © 2020

Show/Hide Header





## VIDEO



## SLIDES

## Simple Interface

```

1 var touch;
2
3 var GUI = require('GUI');
4
5 var touchscreen = require('touchscreen');
6
7 GUI.displayString('Press touch!');
8 while (true) {
9   touch = touchscreen.getValue();
10  if (touch == touchscreen.UP) {
11    GUI.displayClear();
12    GUI.displayString('You pressed touch UP');
13  }
14  if (touch == touchscreen.DOWN) {
15    GUI.displayClear();
16    GUI.displayString('You pressed touch DOWN');
17  }
18  if (touch == touchscreen.LEFT) {
19    GUI.displayClear();
20    GUI.displayString('You pressed touch LEFT');
21  }
22  if (touch == touchscreen.RIGHT) {
23    GUI.displayClear();
24    GUI.displayString('You pressed touch RIGHT');
25  }
26 }
27

```

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

build. As a result we created Wylidrin Studio, a project that aims to help experience and not experience people and building applications. Further on I would like Cosmin to describe the interface a bit.

>> The interface is pretty simple. You have the main file where you can write the code that you want to run on a device







## VIDEO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018

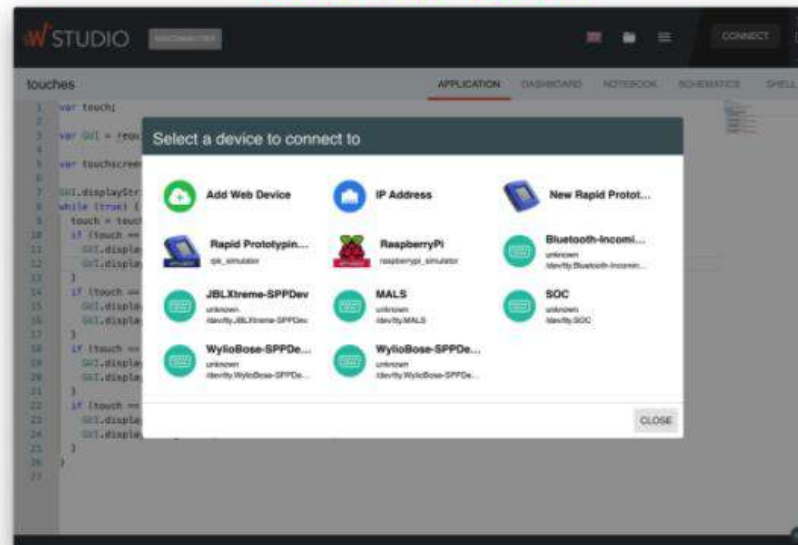


**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Per Lab and then led the ASDIDE lab

## SLIDES

## Device Connection



## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

>> The interface is pretty simple. You have the main file where you can write the code that you want to run on a device and a couple of configuration options. However our aim is to keep it intuitive. Local devices can connect to the platform either by a serial connection or the network. When you hit the connect button the application will scan the network for all the connective devices.



Copyright © 2020

[Show/Hide Header](#)



## VIDEO



## SLIDES

## Run the application

```

1 var touch;
2
3 var GUI = require('GUI');
4
5 var touchscreen = require('touchscreen');
6
7 GUI.displayString('Press touch!');
8 while (true) {
9   touch = touchscreen.getValue();
10  if (touch == touchscreen.UP) {
11    GUI.displayClear();
12    GUI.displayString('You pressed touch UP');
13  }
14  if (touch == touchscreen.DOWN) {
15    GUI.displayClear();
16    GUI.displayString('You pressed touch DOWN');
17  }
18  if (touch == touchscreen.LEFT) {
19    GUI.displayClear();
20    GUI.displayString('You pressed touch LEFT');
21  }
22  if (touch == touchscreen.RIGHT) {
23    GUI.displayClear();
24    GUI.displayString('You pressed touch RIGHT');
25  }
26 }
27

```

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIOLab

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

network. When you hit the connect button the application will scan the network for all the connective devices. In addition you can connect to a remote device by the internets. For this, Wylidrin Studio will generate the connection that you need to copy in the device's memory. Around the application you need to hit the button, and the studio will deploy the source code on the device and launch it.



Copyright © 2020

Show/Hide Header





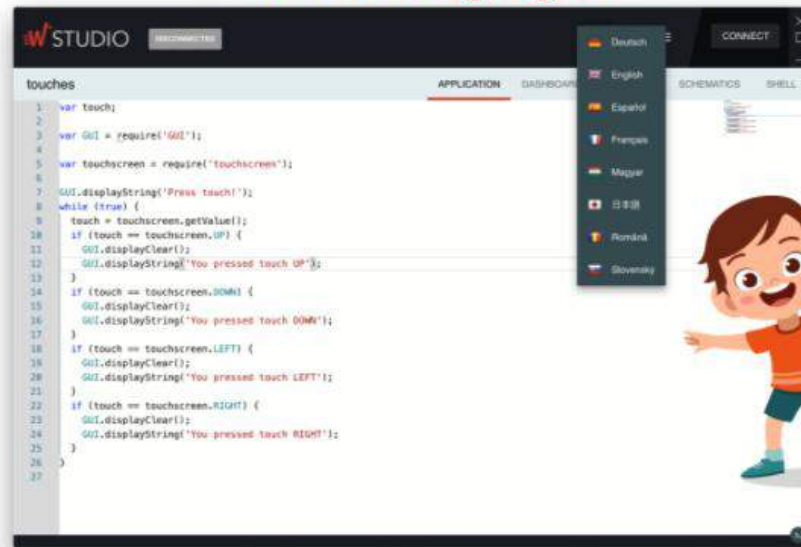


## VIDEO



## SLIDES

## Several Languages



We are looking for translators

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIOLab

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes: **Default** Font Size: **14** Font Family: **Arial** Background: **White** Text Color: **Black** **Scr**

remote device by the internets. For this, Wylodrin Studio will generate the connection that you need to copy in the device's memory. Around the application you need to hit the button, and the studio will deploy the source code on the device and launch it. Wylodrin Studio is available in several languages and of course we are looking for translators to make it even more accessible. This is especially for young users

Copyright © 2020

[Show/Hide Header](#)

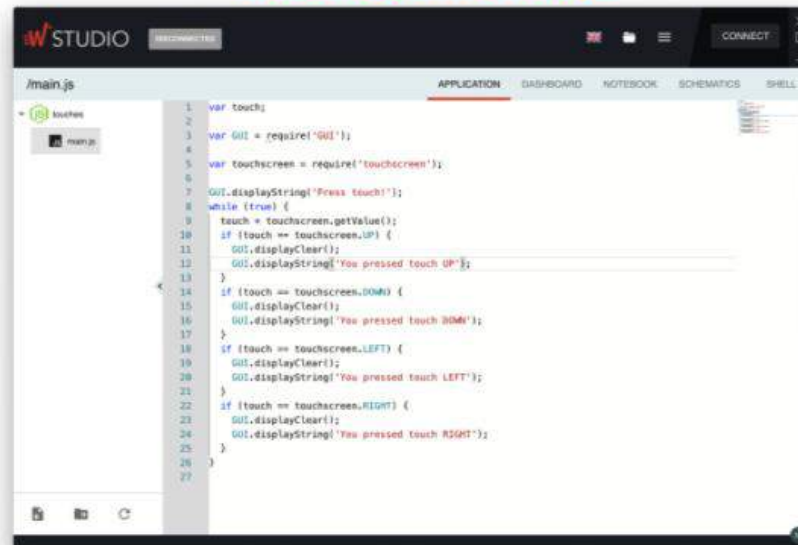


## VIDEO



## SLIDES

## Advanced Interface

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Per Lab and then led the ASDIOLab

## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

the application you need to hit the button, and the studio will deploy the source code on the device and launch it. Wylidrin Studio is available in several languages and of course we are looking for translators to make it even more accessible. This is especially for young users who are more comfortable with the application that is in their phone. For users we have a project we have them to build multiple file applications. This

Copyright © 2020

[Show/Hide Header](#)





## VIDEO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018

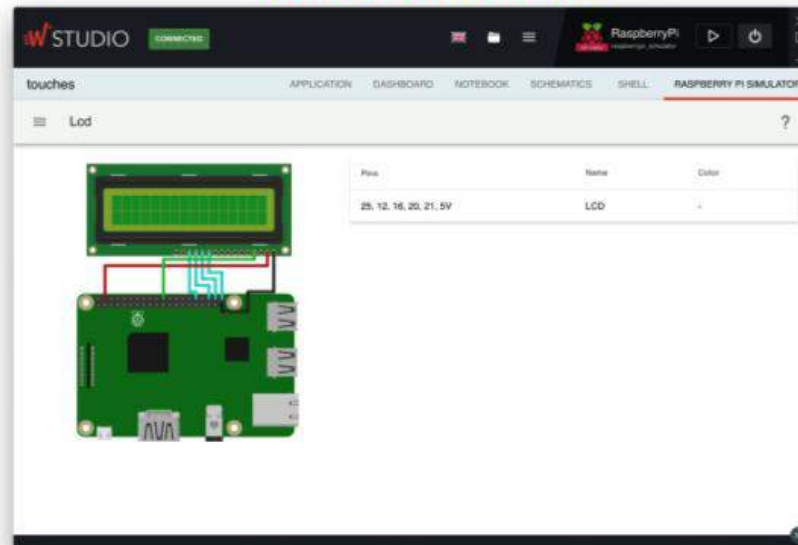


**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Per Lab and then led the ASDIDE lab

## SLIDES

## Device Simulation



## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

describe how the application should start basically when they will hit the button. Wylodrin Studio will run of the command so they can customize how the process will be. They also have the device. We also implement the device simulator. Users can run a very simple application without an actual device. This is to help them to test some very basic functions. Besides the simulator we also

Copyright © 2020

[Show/Hide Header](#)

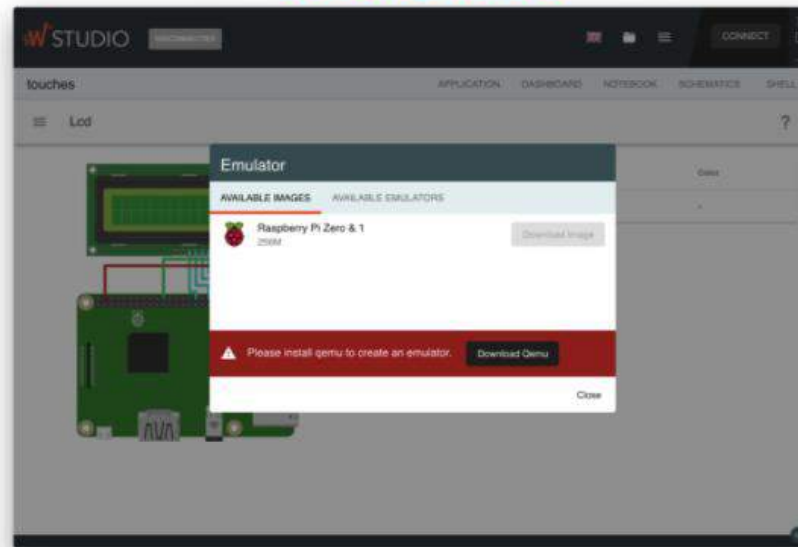


## VIDEO



## SLIDES

## Device Emulator

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Per Lab and then led the ASDIOLab

## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

☒

customize how the process will be. They also have the device. We also implement the device simulator. Users can run a very simple application without an actual device. This is to help them to test some very basic functions. Besides the simulator we also implemented the emulator. This allows you to run more complex applications using only your personal



Copyright © 2020

[Show/Hide Header](#)





## VIDEO

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



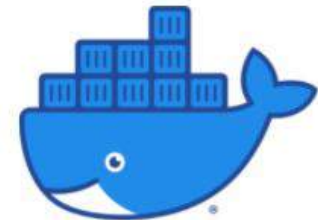
**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab

## SLIDES

## Wyliodrin STUDIO for Small-Scale Deployment

- Makefile
- Dockerfile
- Balena container image
- Starts automatically



## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

emulator. This allows you to run more complex applications using only your personal computer. Now that we have talked about the prototyping part, at the certain point you need to take your projects further and deploy them as products that others can use. The team is taking the first steps towards this direction

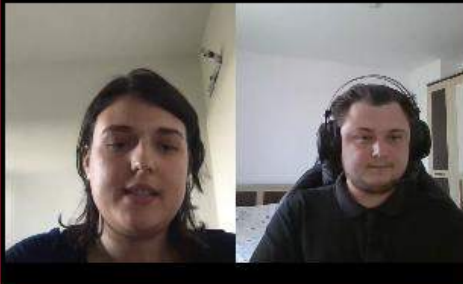


Copyright © 2020

[Show/Hide Header](#)



## VIDEO



## SLIDES

## Users



UCLA



Waterford Institute of Technology

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDI Lab

## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

start. The code is copied on the device and the container is created and launched. If the device reboots or if the application crashes it will automatically restart.

>> Here we have some of our users. Most of them are educational



Copyright © 2020

[Show/Hide Header](#)





## VIDEO



## SLIDES

## Plugin Based

- Device Connectors
  - WyApp
  - Rapid IoT
- Editors
  - Monaco
  - Blockly
  - OPC-UA Model
- Languages
  - Python
  - NodeJS
  - Shell
  - Visual
- Virtual
  - Simulator (limited)
  - QEMU Raspberry Pi Emulator
- Dashboard (graphs)
- Notebook
- Shell
  - Full shell access

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Per Lab and then led the ASDIDE lab

## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

automatically restart.

>> Here we have some of our users. Most of them are educational institutions and you and the U.S. The platform relies come it's very easy to extent and anyone can bring new functionalities without having to interfere with the previous code



Copyright © 2020

[Show/Hide Header](#)




## VIDEO

Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab

## SLIDES

## Wylidrin STUDIO platform



**Easy to use IDE**



**GDPR ready**



**Easy to extend**  
plugin based



## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

functionalities presented before. We can see the languages, Python, Shell, and the visual programming which is actually based on Google blocking. Besides being an easy to use I.D., Wylidrin Studio doesn't store any details. In regards to the devices that we support, Wylidrin Studio is

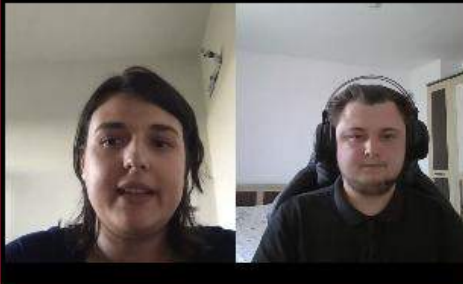
Copyright © 2020

[Show/Hide Header](#)





## VIDEO



## SLIDES

## Wylodrin STUDIO platform



## Desktop Application

- Local computer storage
- Local connection to the boards



## Web Application

- Local browser storage
- GDPR compliant (no account needed, no data stored)

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab.

## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

Studio is compatible with the raspberry pi and prototyping kits. Here we would like to thank Linux for these supports. They have helped us at integrating this device and they also offer scholarships for our students so we can work on this. You can either use it as a desktop application or in a browser. In both cases the platform doesn't store any user data or it's storing on your computer.



Copyright © 2020

[Show/Hide Header](#)



## VIDEO

Q&A WITH SPEAKER **SPEAKER BIO**

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIDE lab

## SLIDES

## Wylidrin STUDIO platform



Open source



Written in JavaScript Apache 2.0 License

electron



## CAPTIONING

You are connected to event:  
**Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

integrating this device and they also offer scholarships for our students so we can work on this. You can either use it as a desktop application or in a browser. In both cases the platform doesn't store any user data or it's storing on your computer. It's open source as we mentioned before. The license is 2.0, so we would like to invite everyone to visit the platform.



Copyright © 2020

[Show/Hide Header](#)



## VIDEO



## SLIDES

# Thank you

<https://wylodrin.studio><https://github.com/WylodrinSTUDIO>Q&A WITH SPEAKER SPEAKER BIO

**Daniel Qian**  
Software Engineer  
eBay

Shijun (Daniel) Qian works on eBay's cloud team. He has a wide range of interests in many aspects of cloud native computing, mainly focused on cluster lifecycle management, monitoring, and networking. He is also an active open source contributor (github: @danielqsj): 1. Kubernetes Member & Reviewer 2. Top 100 contributors of Kubernetes. 3. Sponsor and maintainer of Prometheus components: kafka-exporter. 4. Speaking in KubeCon CloudNativeCon China 2018



**Krste Asanovic**  
Professor  
UC Berkeley

Krste Asanovic is a Professor in the EECS Department at the University of California, Berkeley. He received a Ph.D. in Computer Science from UC Berkeley in 1998 then joined the faculty at MIT, receiving tenure in 2005. He returned to join the faculty at Berkeley in 2007, where he co-founded the Berkeley Data Lab and then led the ASDIOLab

## CAPTIONING

You are connected to event: **Linux-Foundation**

Themes:

Default

Font Size:

14

Font Family:

Arial

Background:

White

Text Color:

Black

Scr

and we've also just recently published a book together. It's not on the slides. It's really recent, but you can find it on our websites. With that being said, we would like to thank you for your attention and we will take any questions.

>>

Copyright © 2020

Show/Hide Header

