Technical Advisory Council Meeting

June 4, 2020

THE LINUX FOUNDATION

LF AI

Antitrust Policy Notice

- Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.

- Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at http://www.linuxfoundation.org/antitrust-policy. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Undergone LLP, which provides legal counsel to the Linux Foundation.

Recording of Calls

Reminder that TAC calls are recorded and available for viewing on the TAC Wiki

Reminder: LF AI Useful Links

Web site: lfai.foundation
Wiki: wiki.lfai.foundation
GitHub: github.com/lfai
Landscape: landscape.lfai.foundation or l.lfai.foundation
Mail Lists: https://lists.lfai.foundation

LF AI Logos: https://github.com/lfai/artwork/tree/master/lfai
LF AI Presentation Template:
https://drive.google.com/file/d/1eiDNJvXCqSZHT4Zk_-czASlz2GTBRZk2/view?usp=sharing

Events Page on LF AI Website: https://lfai.foundation/events/
Events Calendar on LF AI Wiki (subscribe available):
https://wiki.lfai.foundation/pages/viewpage.action?pageId=12091544
Event Wiki Pages: https://wiki.lfai.foundation/display/DL/LF+AI+Foundation+Events

Agenda

- Roll Call
- Approval of Minutes
- Guest Presentations
  - AI for People
  - Ambianic.ai
- LF AI General Updates
- Upcoming TAC Meetings
- Open Discussion

TAC Voting Members

Member	TAC Contact	TAC Email
AT&T	Reuben Klein	rk1518@att.com
Baidu	Daxiang Dong	dongdaxiang@baidu.com
Ericsson	Rani Yadav-Ranjan	rani.yadav-ranjan@ericsson.com
Huawei	Huang Zhipeng	huangzhipeng@huawei.com
Nokia	Pantelis Monogioudis	pantelis.monogioudis@nokia.com
Tech Mahindra	Nikunj Nirmal	nn006444@techmahindra.com
Tencent	Bruce Tao	brucetao@tencent.com
Zilliz	Jun Gu	jun.gu@zilliz.com
ZTE	Wei Meng	meng.wei2@zte.com.cn
Acumos AI Project	Anwar Aftab	anwar@research.att.com
Angel Project	Bruce Tao	brucetao@tencent.com
ONNX Project	*Jim Spohrer	spohrer@us.ibm.com

Approval of Minutes

- Draft minutes from the May 21st meeting of the TAC were previously distributed to the TAC members

- **Proposed Resolution:**
  - That the minutes of the May 21st meeting of the Technical Advisory Council of the LF AI Foundation are hereby approved

Guest Presentation: AI for People

Marta Ziosi

AI for People

AI for People

No-profit research association to promote the use of Artificial Intelligence based on human and societal needs

founders

Marta Ziosi

Vincenzo Lomonaco

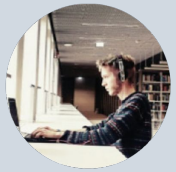
Angelo Trotta

Giovanni Gaspare

management team

Gabriele Graffieti

Matteo Fabbri



Philipp Wicke

AI for People

We are an interdisciplinary team

founders

Marta Ziosi

Vincenzo Lomonaco

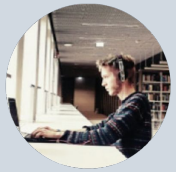
Angelo Trotta

Giovanni Gaspare

management team

Gabriele Graffieti

Matteo Fabbri



Philipp Wicke

AI for People

With one goal

founders

Marta Ziosi

Vincenzo Lomonaco

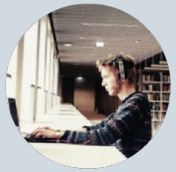
Angelo Trotta

Giovanni Gaspare

management team

Gabriele Graffieti

Matteo Fabbri



Philipp Wicke

AI for People

To ensure that the development of AI Technology **starts from** and it **is for** the **people**

founders

Marta Ziosi

Vincenzo Lomonaco

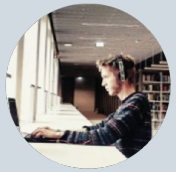
Angelo Trotta

Giovanni Gaspare

management team

Gabriele Graffieti

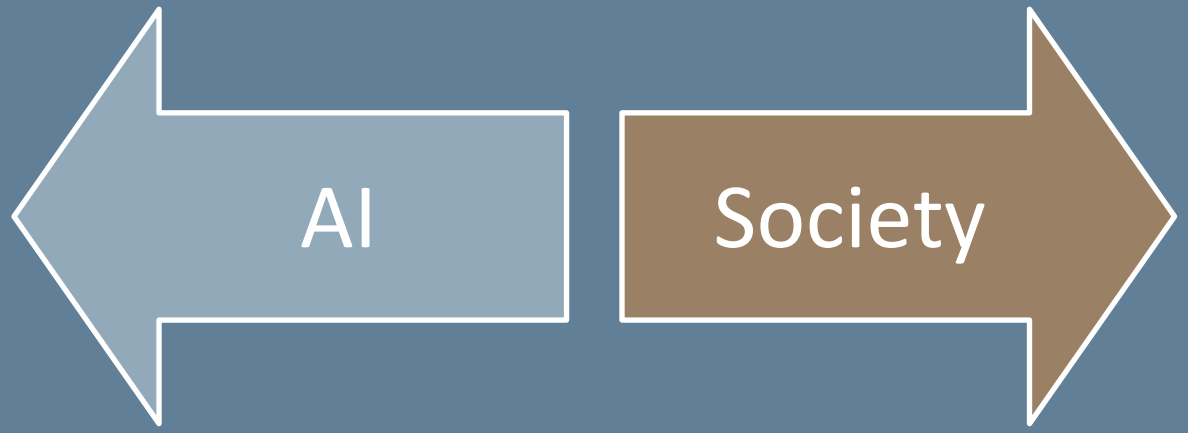
Matteo Fabbri

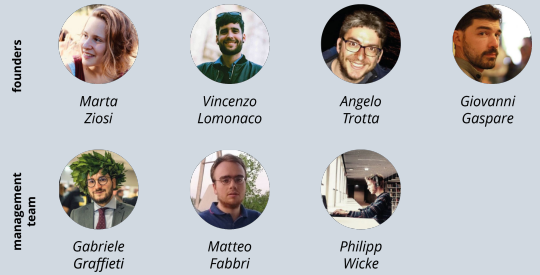


Philipp Wicke

Mission

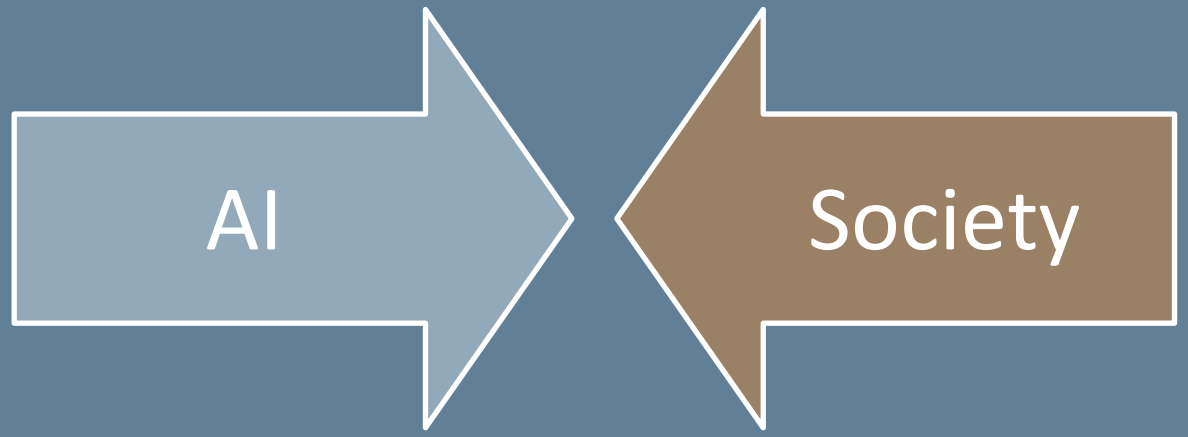
We want to counter

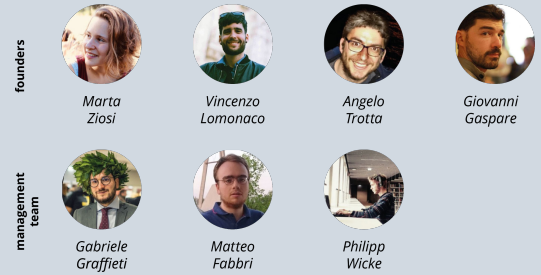




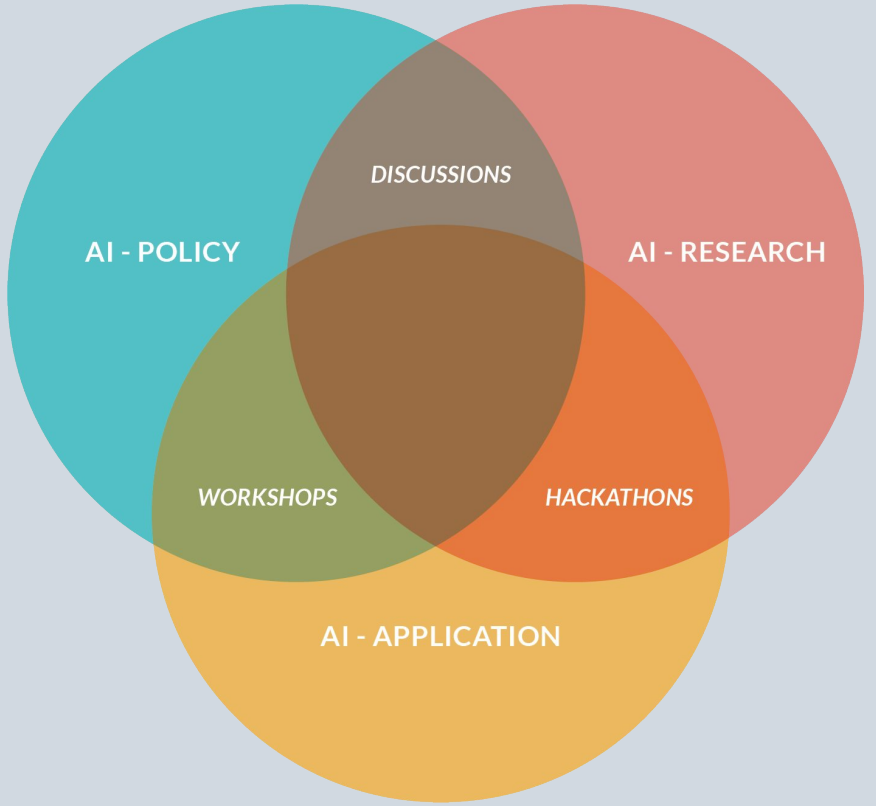
Mission

We want to achieve





How?

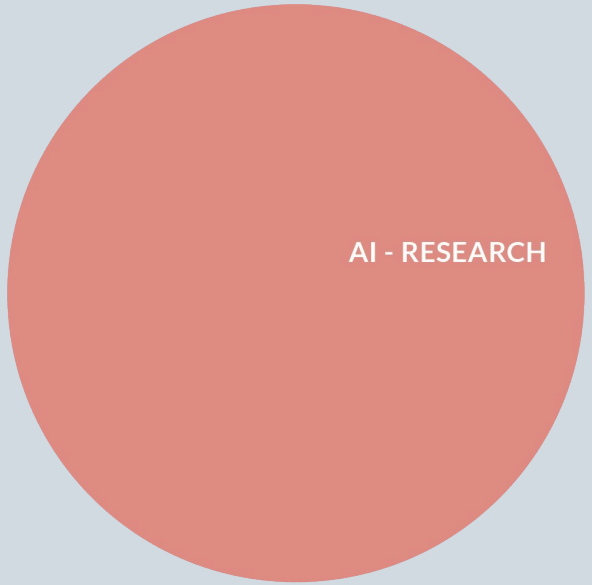

AI - POLICY
AI - RESEARCH
AI - APPLICATION
DISCUSSIONS
WORKSHOPS
HACKATHONS

AI Policy

https://www.aiforpeople.org/policies/

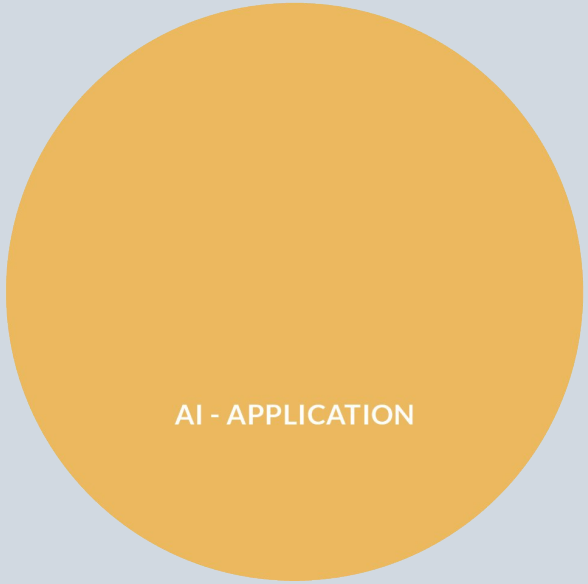
AI Research

https://www.aiforpeople.org/research/

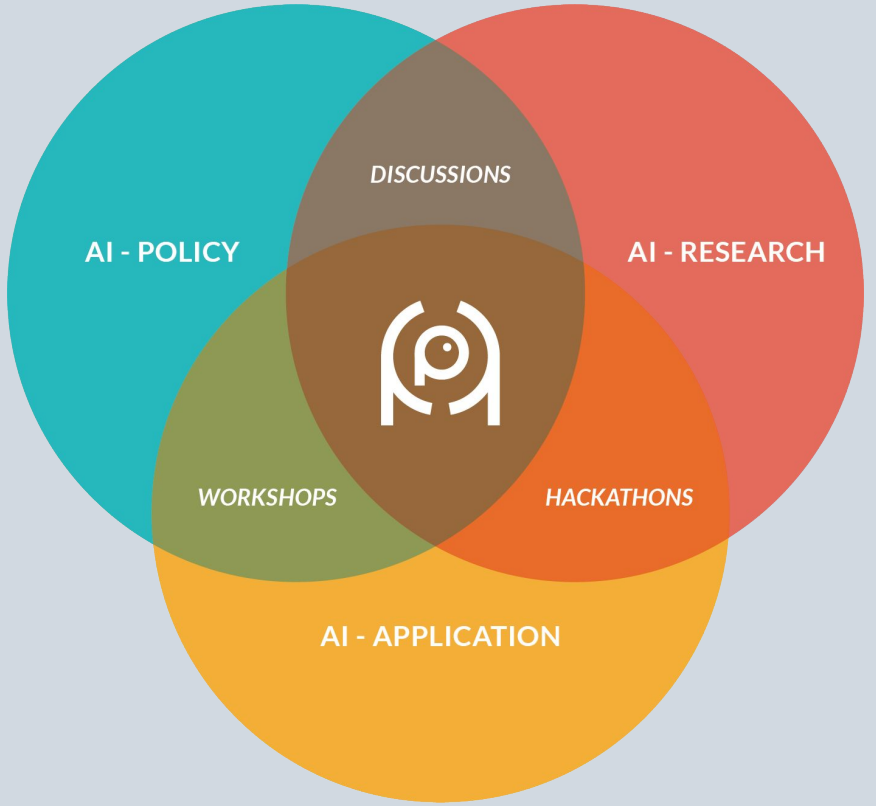


AI Applications

https://www.aiforpeople.org/projects/



Our Activities



Our Contacts

Website: www.aiforpeople.org

LinkedIn:linkedin.com/company/ai-for-people/

Facebook: www.facebook.com/aiforpeople

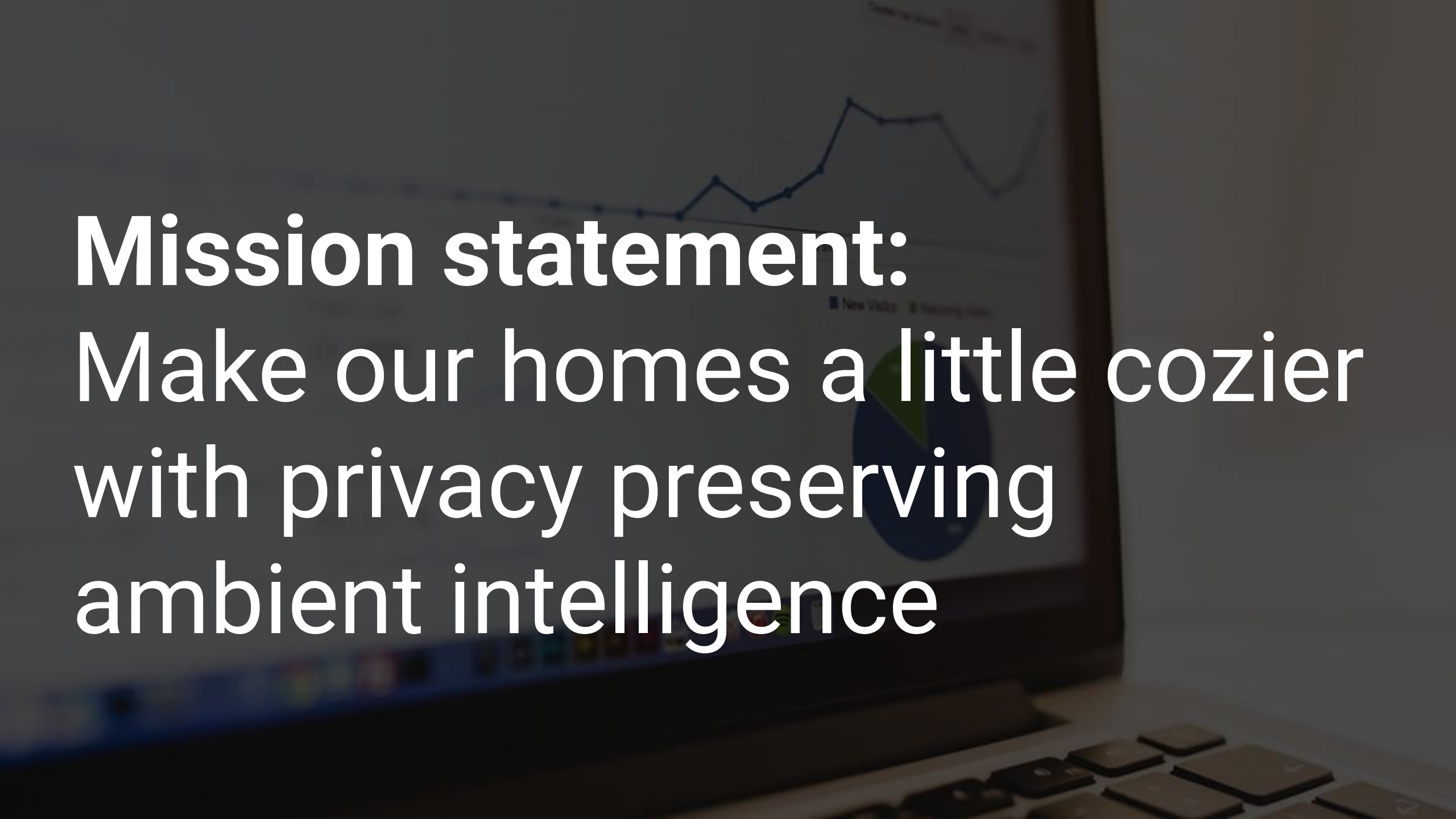
Medium: www.medium.com/ai-for-people

Guest Presentation: Ambianic.ai

Ivelin Ivanov

AMBIANIC

Open Source Ambient Intelligence

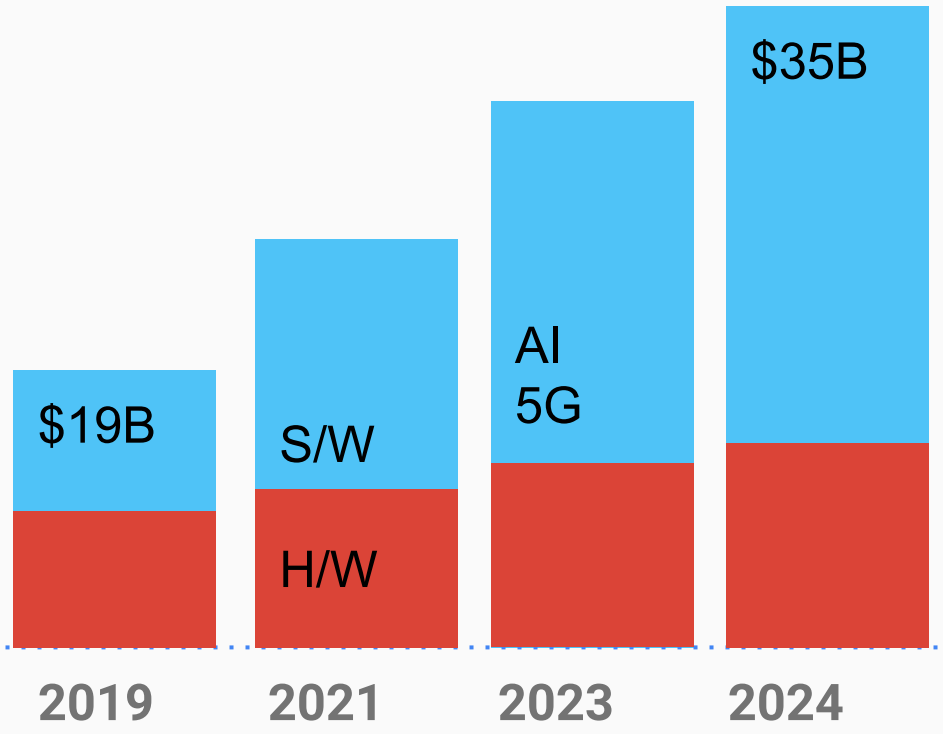


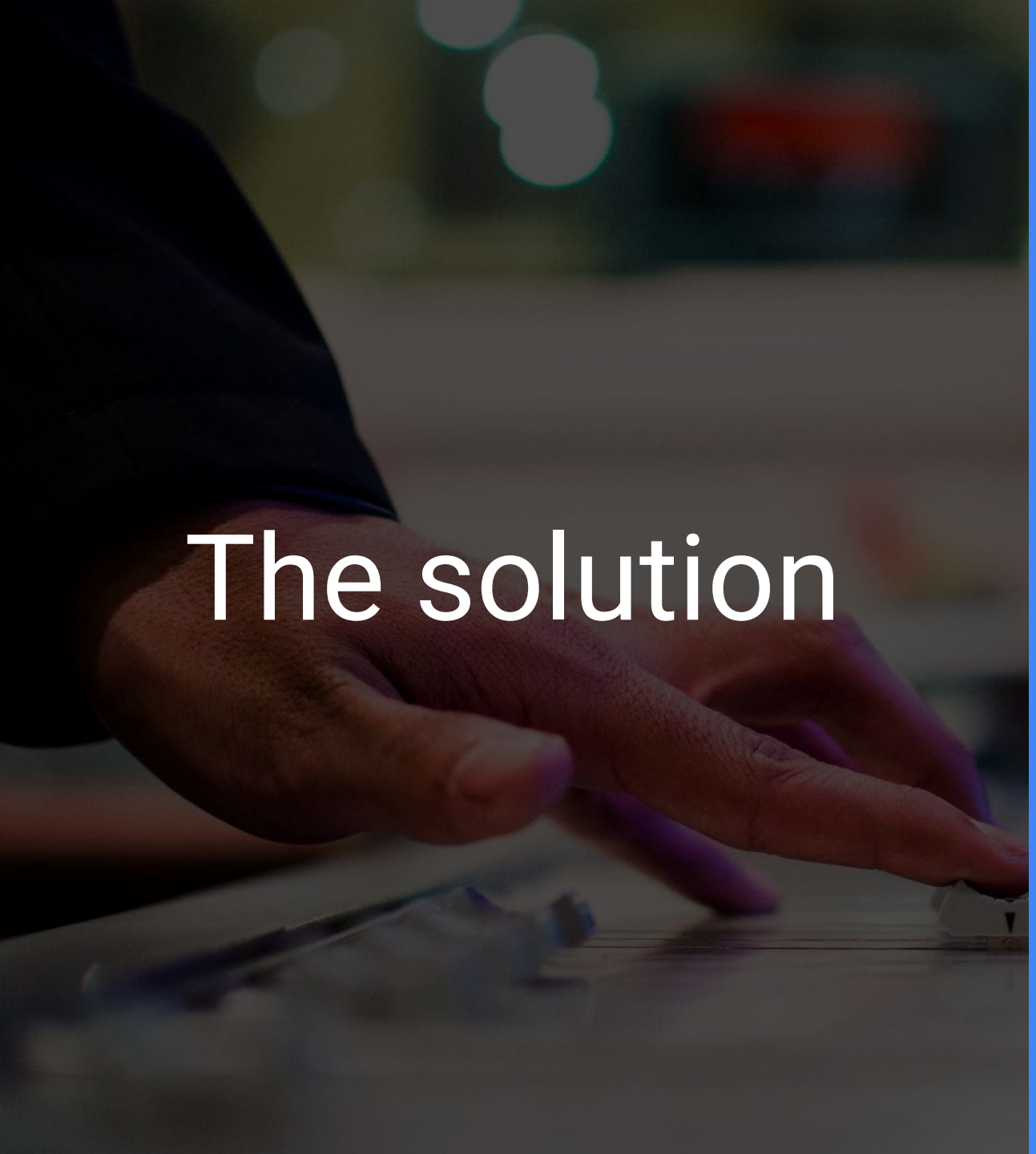
Mission statement:
Make our homes a little cozier with privacy preserving ambient intelligence

The problem

Security surveillance is growing faster than ever due to advances in AI and mobile communications.

However numerous privacy issues cast a Big Brother Stigma over products in this market.





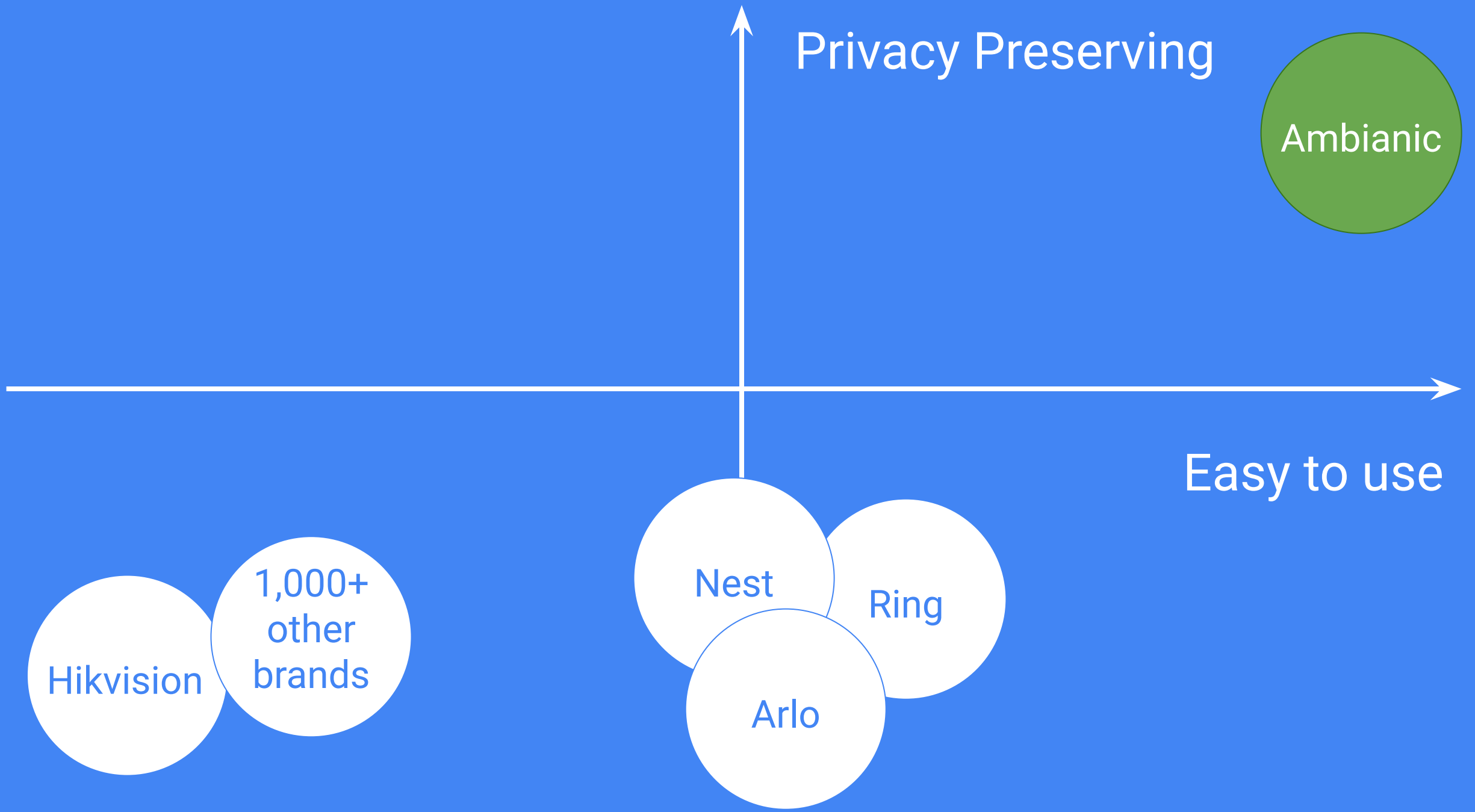
The solution

Preserve Privacy in:

- AI
- Storage
- Remote Access

Remove the stigma via Open Source Transparency.

Stay ahead of government regulations.


Privacy Preserving
Ambianic
Easy to use
Hikvision
1,000+
other
brands
Nest
Ring
Arlo

How it works

Step 1

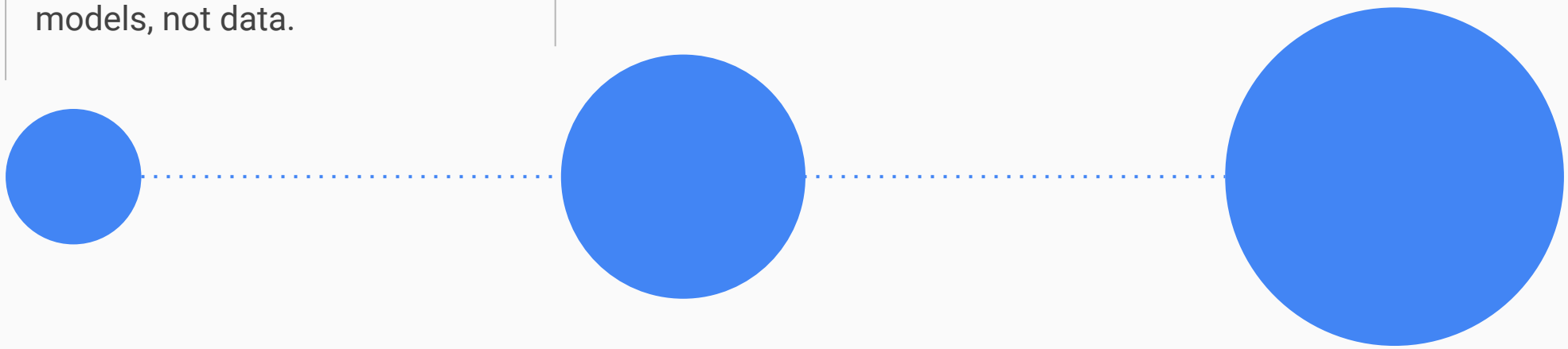
Run AI locally. Train on local data. Share models, not data.

Step 2

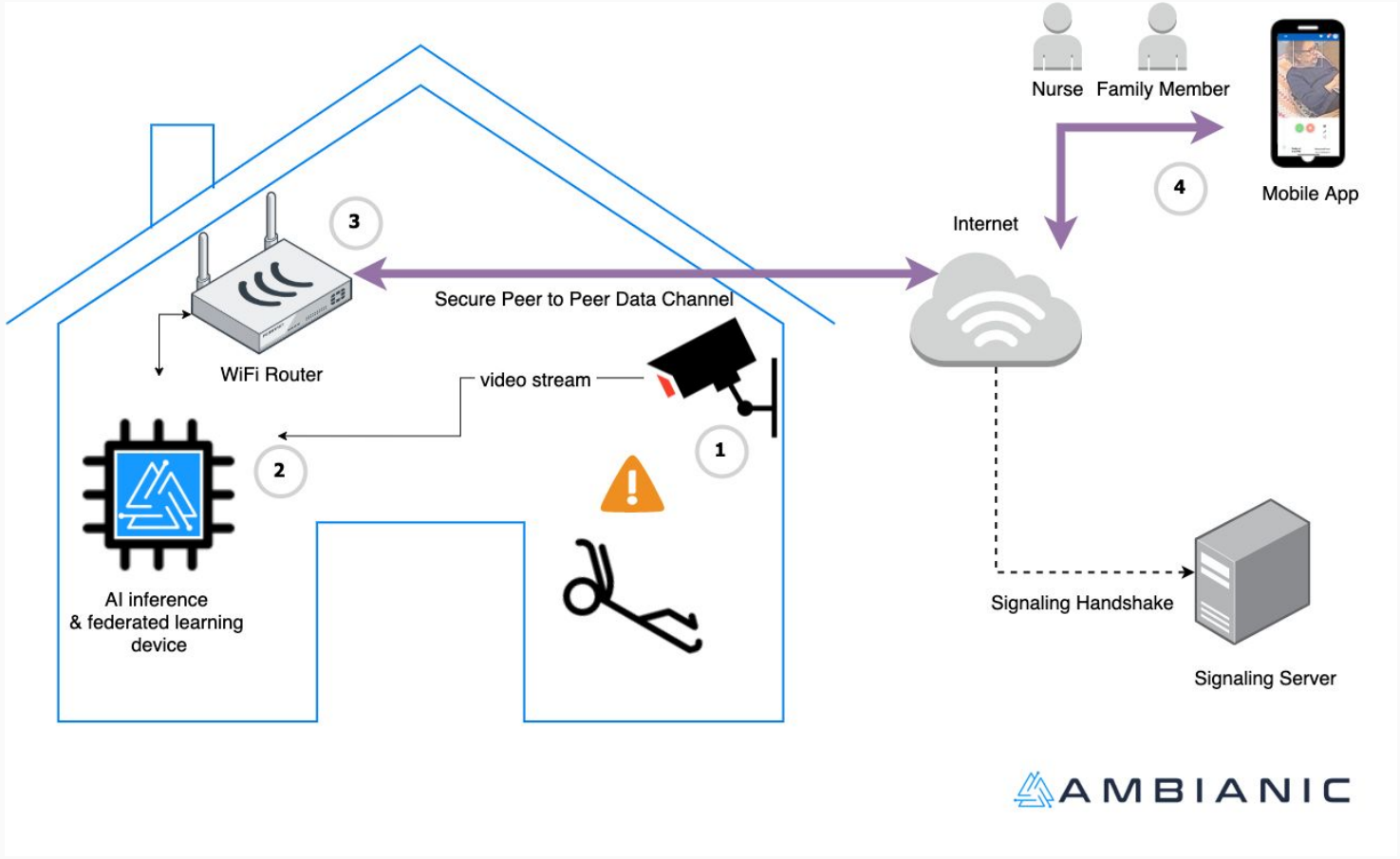
Local storage with optional remote back-up. Transparency and full user control.

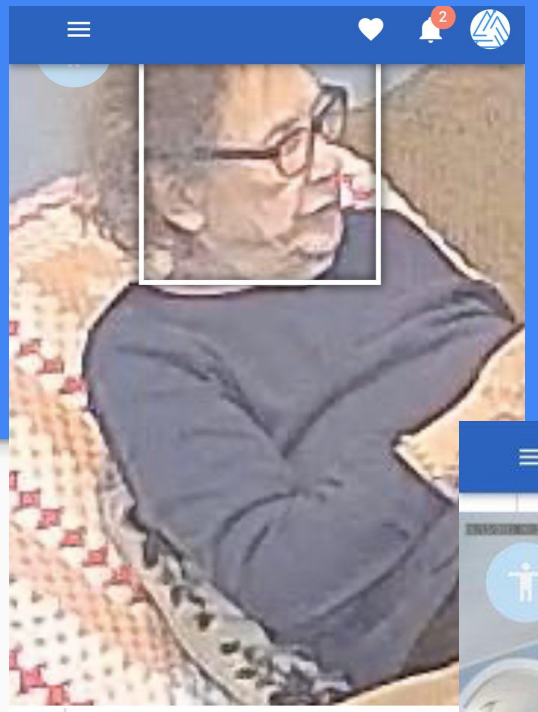
Step 3

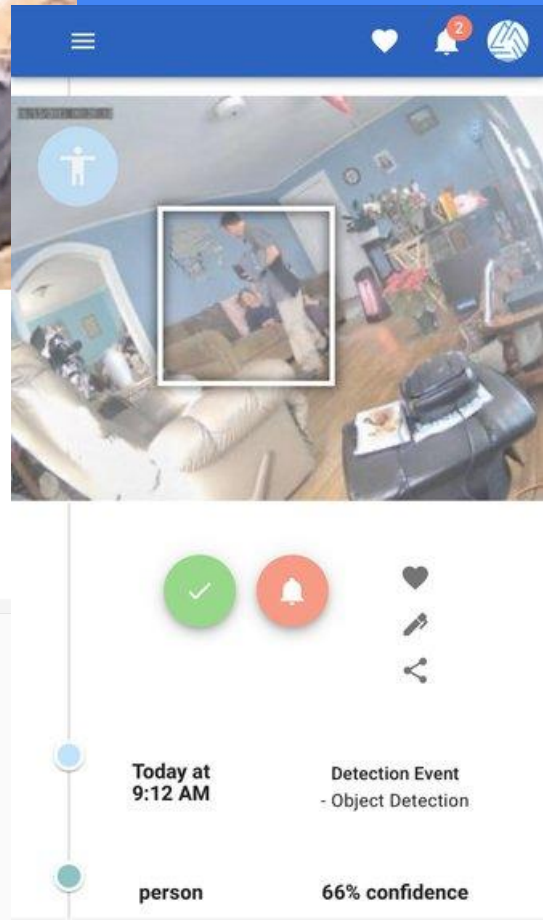
P2P communication with user mobile device. Minimize man-in-the-middle issues.



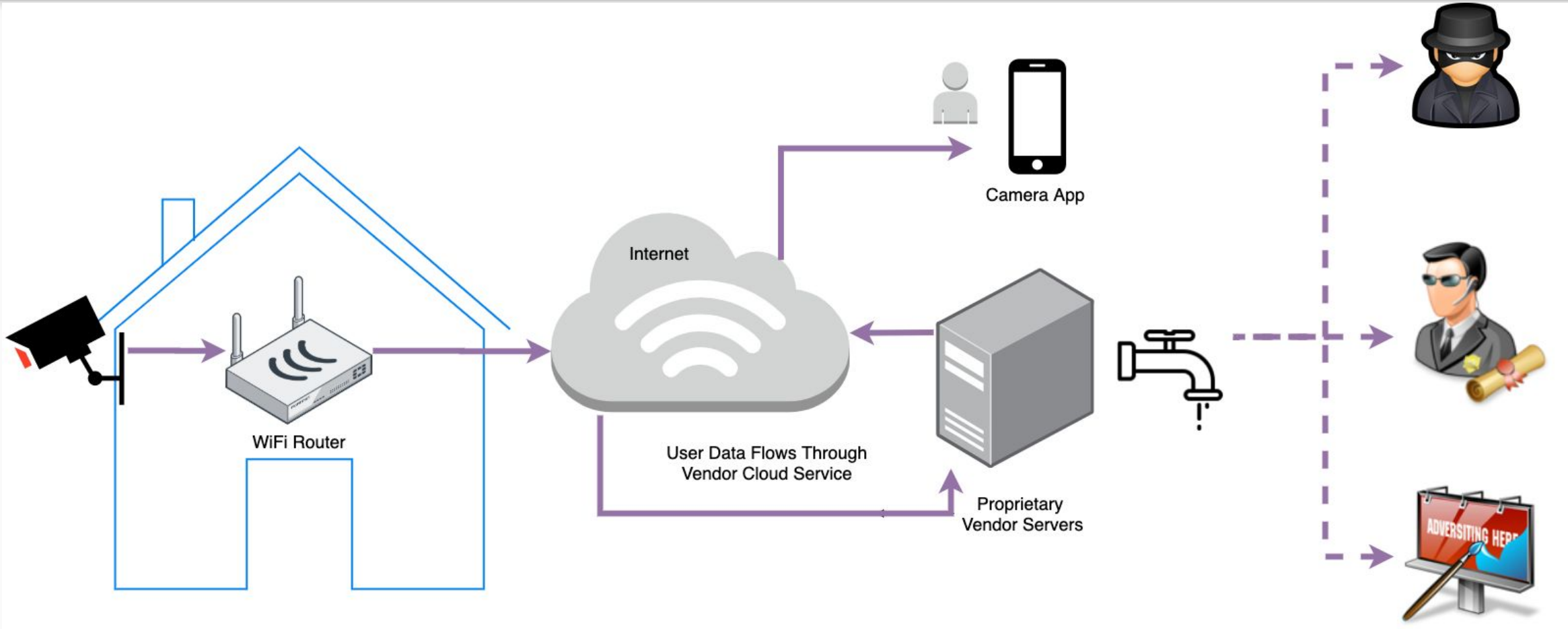
Remote Home Care amid COVID19



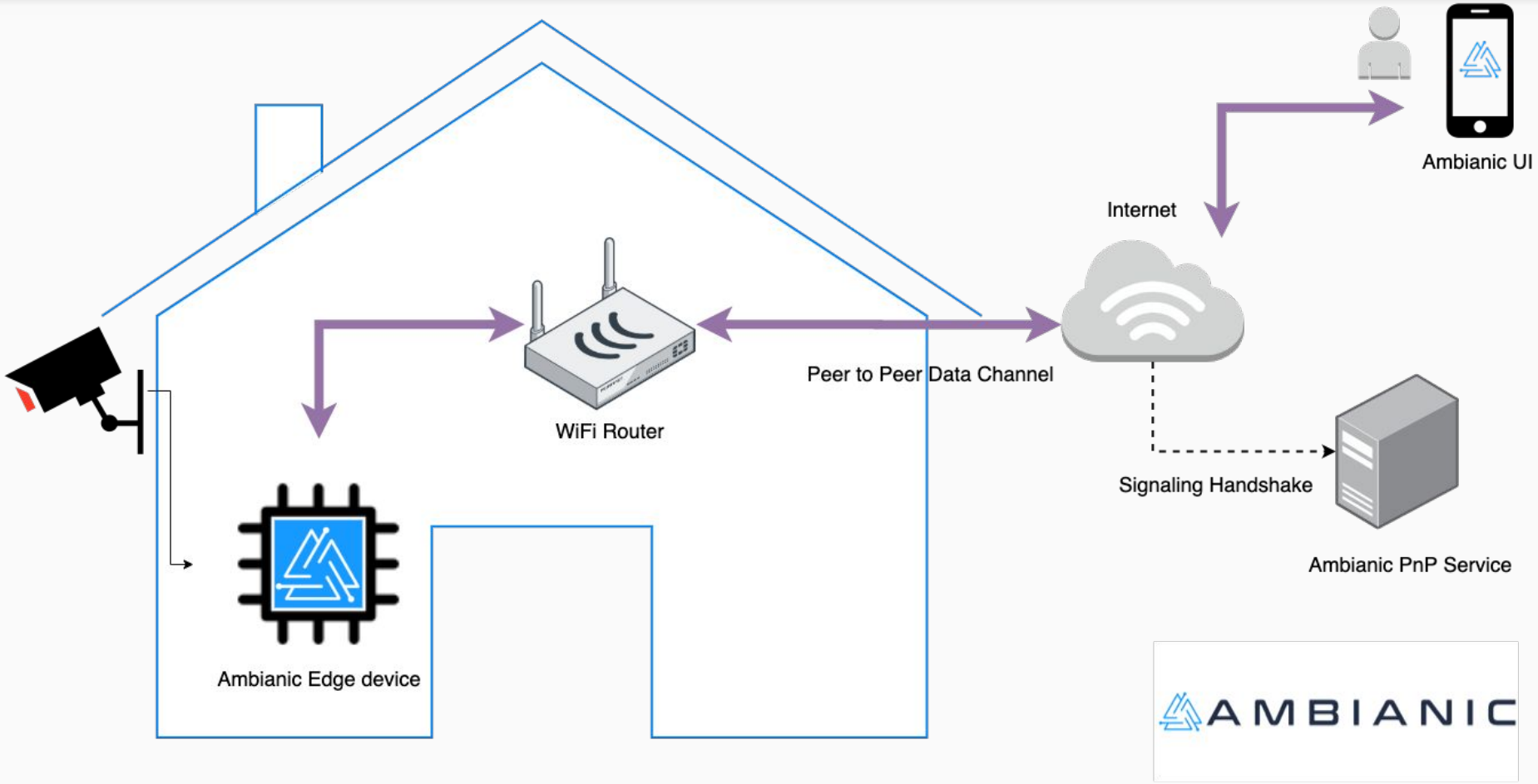




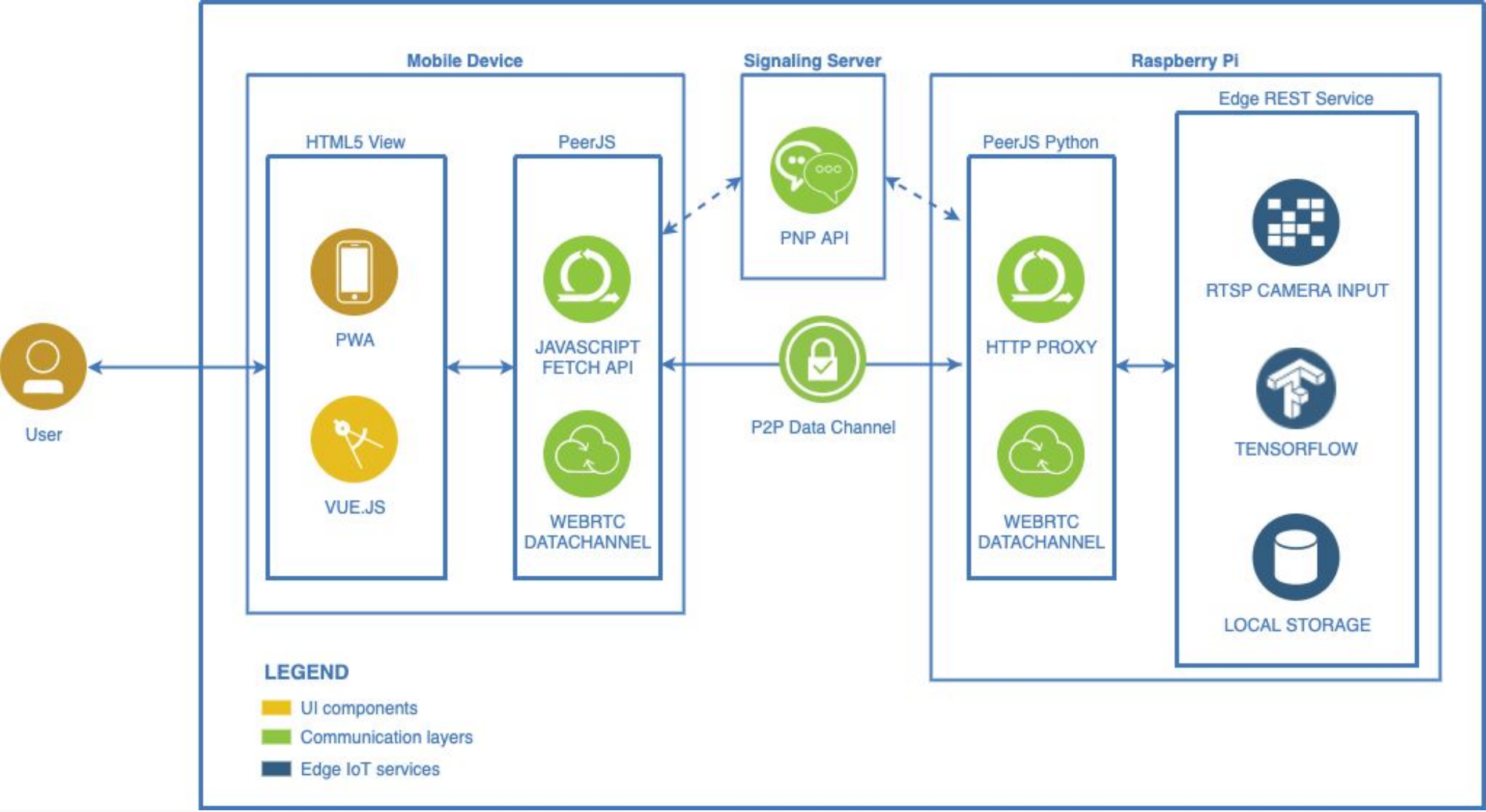
Architecture of Popular Brands



Ambianic.ai Architecture



The technology:
Federated Learning,
WebRTC, PWA


Mobile Device
Signaling Server
Raspberry Pi
Edge REST Service
HTML5 View
PeerJS
PeerJS Python
PWA
VUE.JS
JAVASCRIPT FETCH API
WEBRTC DATACHANNEL
PNP API
P2P Data Channel
HTTP PROXY
WEBRTC DATACHANNEL
RTSP CAMERA INPUT
TENSORFLOW
LOCAL STORAGE
User
LEGEND
UI components
Communication layers
Edge IoT services

My Home Setup

Try It

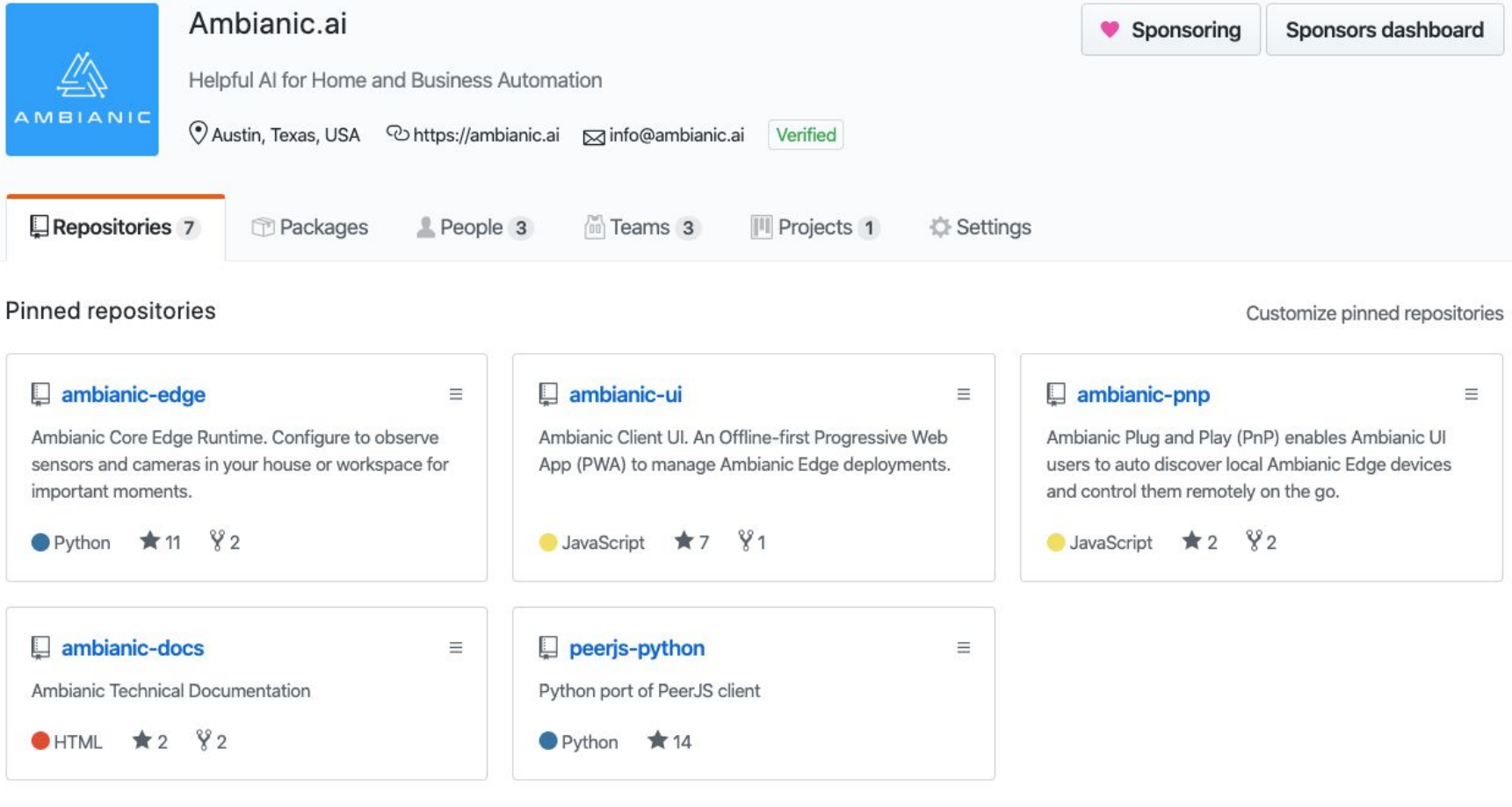
Recorded intro video: https://youtu.be/rdlwMa-5xkU

5 Minute Quick Start Guide: https://docs.ambianic.ai/users/quickstart/

PWA host: https://app.netlify.com/sites/happy-franklin-69b6d4/overview

PnP Server: https://dashboard.heroku.com/apps/ambianic-pnp/deploy/github

https://github.com/ambianic



JavaScript frameworks used for UI PWA

- VueJS: https://vuejs.org/
- Vuetify: https://vuetifyjs.com/en/
- PeerJS: https://peerjs.com/

UI State Machine diagram

UI Mockup Flow diagram

Python frameworks used on edge device

- TFLite for Python: https://www.tensorflow.org/lite/guide/get_started
- GStreamer Python Bindings: https://gstreamer.freedesktop.org/modules/gst-python.html
- AIORTC: https://github.com/aiortc/aiortc

Interaction diagrams and sample code:
https://webrtchacks.com/private-home-surveillance-with-the-webrtc-datachannel/

Related project: Writing Custom Tensorflow Datasets

Hackathons

HackCovid19, Pandemic Response, March 27, 2020:
https://devpost.com/software/remote-elderly-home-care-via-privacy-preserving-surveillance

The Global Hack, Fight for our future, April 11, 2020:

https://devpost.com/software/remote-elderly-home-care-via-privacy-preserving-surveillance-y8sgxi

COVIDathon, Decentralized AI hackathon, June 1, 2020:

https://devpost.com/software/remote-elderly-home-care-via-privacy-preserving-surveillance-dano89

Questions?

ivelin.ivanov@ambianic.ai

Twitter:

@ivelini

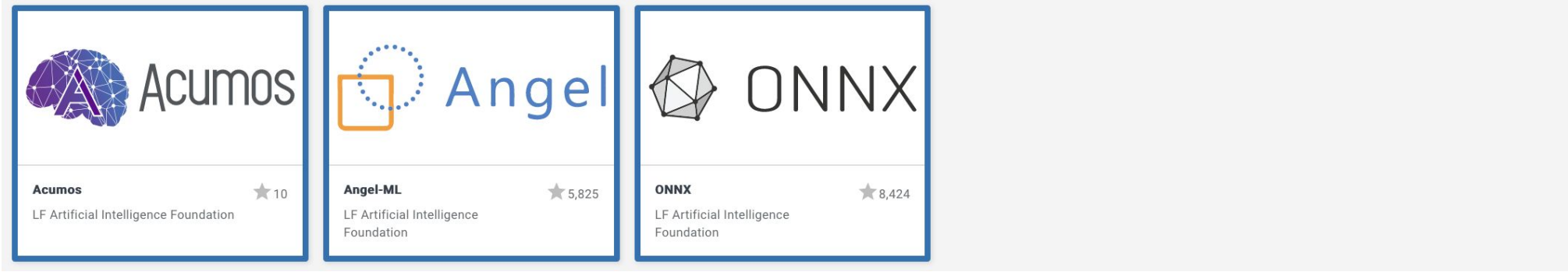
@ambianicai

LF AI General Updates

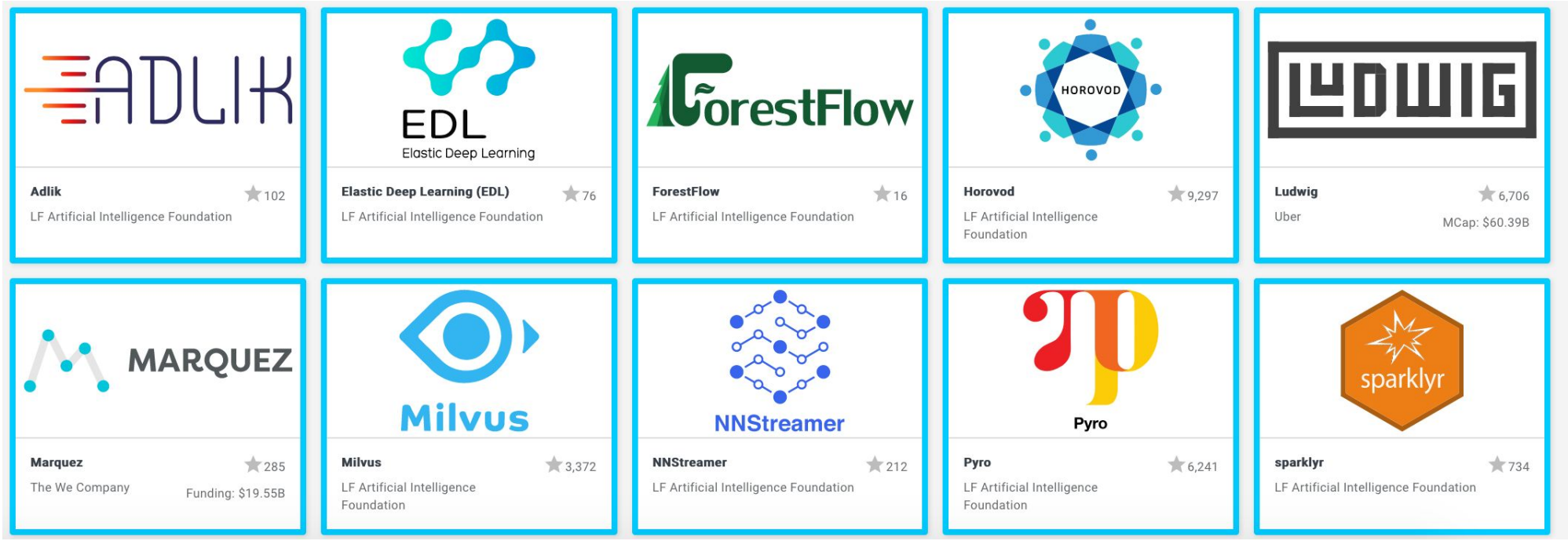
Project Updates

LF AI Hosted Projects

Graduation



Incubation



Upcoming Releases

For links to details on upcoming releases for LF AI hosted projects visit the Technical Project Releases wiki

Project releases will be announced via a blog post and promoted on LF AI Twitter and/or LinkedIn social channels

If you are an LF AI hosted project and would like LF AI to promote your release, reach out to pr@lfai.foundation to coordinate in advance (min 2 wks) of your expected release date. Please reach out for more details and/or questions.

Outreach Committee

LF AI PR/Comms

- Please follow LF AI on Twitter & LinkedIn and help amplify news via your social networks - Please retweet and share!
  - Also watch for news updates via the tac-general mail list
  - View recent announcement on the LF AI Blog

- Open call to publish project/committee updates or other relevant content on the LF AI Blog

- To discuss more details on participation or upcoming announcements, please email pr@lfai.foundation

Events

- Upcoming Events
  - Visit the LF AI Events Calendar or the LF AI 2020 Events wiki for a list of all events
  - To participate visit the LF AI 2020 Events wiki page or email info@lfai.foundation

- Please consider holding virtual events
  - To discuss participation, please email events@lfai.foundation

Call to Participate in Ongoing Efforts

Trusted AI

- **Leadership:**
  Animesh Singh (IBM), Souad Ouali (Orange), and Jeff Cao (Tencent)
- **Goal:** Create policies, guidelines, tooling and use cases by industry
- **Github:**
  https://github.com/lfai/trusted-ai
- **Wiki:**
  https://wiki.lfai.foundation/display/DL/Trusted+AI+Committee
- **To participate:**
  https://lists.lfai.foundation/g/trustedai-committee/
- **Next call:** Bi-weekly on Thursdays at 7am PT, subscribe to group calendar on wiki
  https://wiki.lfai.foundation/pages/viewpage.action?pageId=12091895

ML Workflow & Interop

- **Leadership:**
  Huang "Howard" Zhipeng (Huawei)
- **Goal:**
  Define an ML Workflow and promote cross project integration
- **Wiki:**
  https://wiki.lfai.foundation/display/DL/ML+Workflow+Committee
- **To participate:**
  https://lists.lfai.foundation/g/mlworkflow-committee
- **Next call:** Every 4 weeks on Thursdays at 7:00 am PT, subscribe to group calendar on wiki
  https://wiki.lfai.foundation/pages/viewpage.action?pageId=18481242

Upcoming TAC Meetings

Upcoming TAC Meetings

- **June 18:** TBD
- **July 2:** TBD

TAC Meeting Details

- To subscribe to the TAC Group Calendar, visit the wiki: https://wiki.lfai.foundation/x/XQB2
- Join from PC, Mac, Linux, iOS or Android: https://zoom.us/j/430697670
- Or iPhone one-tap:
  - US: +16465588656,,430697670# or +16699006833,,430697670#
- Or Telephone:
  - Dial(for higher quality, dial a number based on your current location):
  - US: +1 646 558 8656 or +1 669 900 6833 or +1 855 880 1246 (Toll Free) or +1 877 369 0926 (Toll Free)
- Meeting ID: 430 697 670
- International numbers available: https://zoom.us/u/achYtcw7uN

Open Discussion

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- Please email legal@linuxfoundation.org with any questions about The Linux Foundation's policies or the notices set forth on this slide.