

Confidate

Infrastructure for private content
personalisation

Main Track: "AI, Account Abstraction and Emerging Ideas"
Sponsor bounties: "Solve For Data With Filecoin And/Or IPC"

Problem

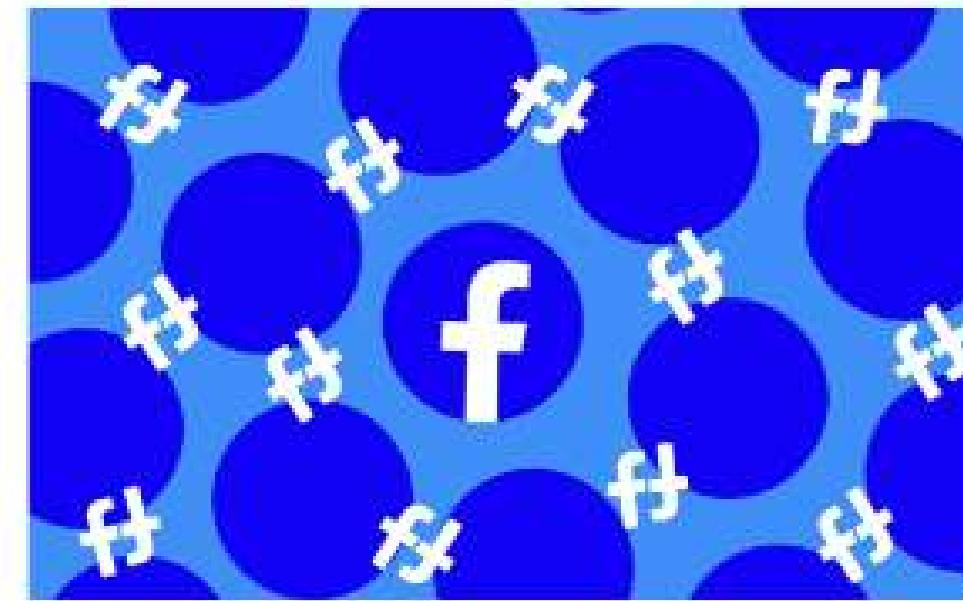


People rely on personalised content to navigate the internet...



But today, personalised content costs users their privacy

Meta fined \$276 million over Facebook data leak involving more than 533 million users



/ The April 2021 leak exposed the phone numbers, locations, and birthdates of Facebook users on the platform from 2018 to 2019.

By Emma Roth, a news writer who covers the streaming wars, consumer tech, crypto, social media, and much more. Previously, she was a writer and editor at MASH.

Nov 26, 2022, 3:02 PM GMT

Bumble Vulnerabilities Put Facebook Likes, Locations And Pictures Of 95 Million Daters At Risk

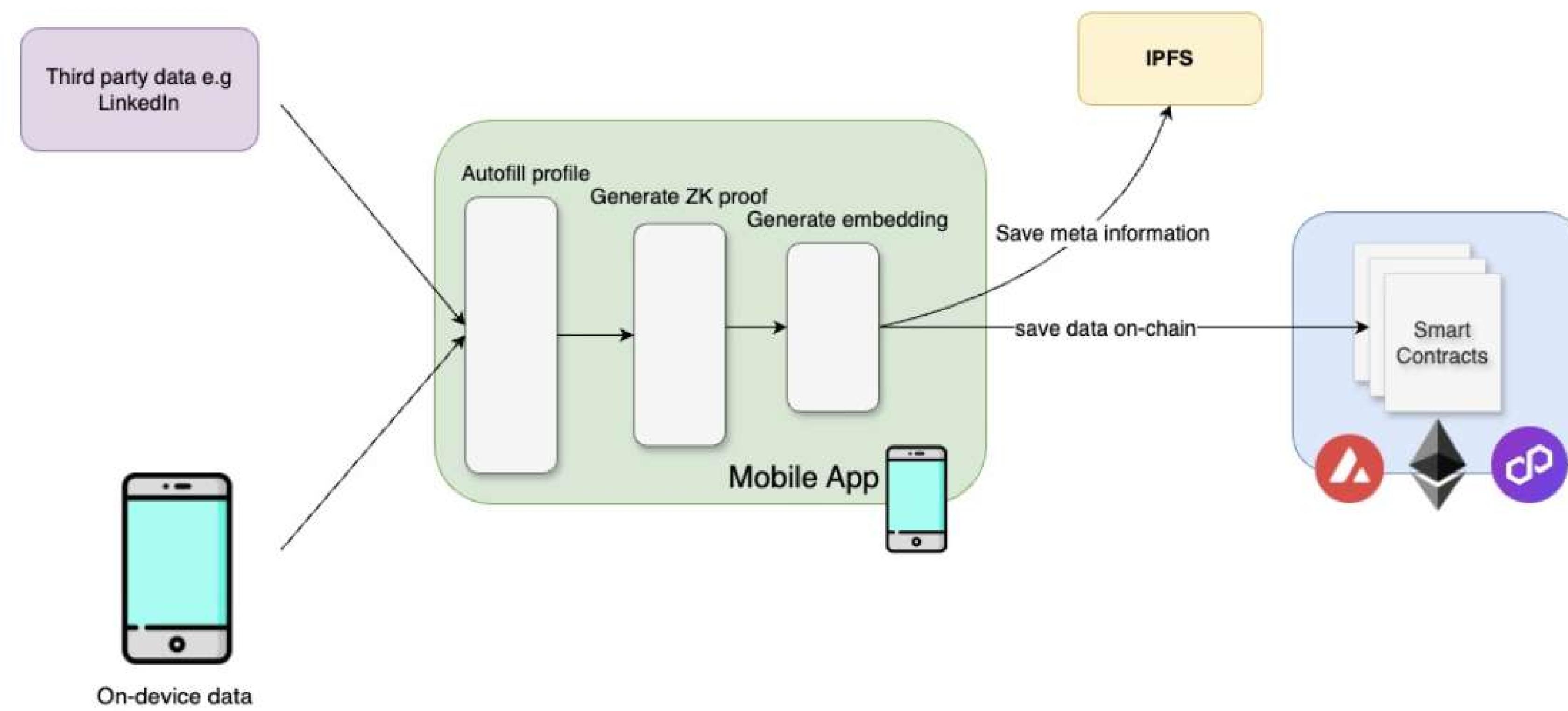
Our solution



Infrastructure for social media apps to personalise content while upholding user privacy.



We leverage on-device ML and cryptography to create feature-rich and privacy-preserving user representations on-chain



USE CASES

Dating

Find a partner without revealing your personal data



Networking

Build meaningful business relations without compromising your data



Financial institutions

Credit scoring with privacy guarantees



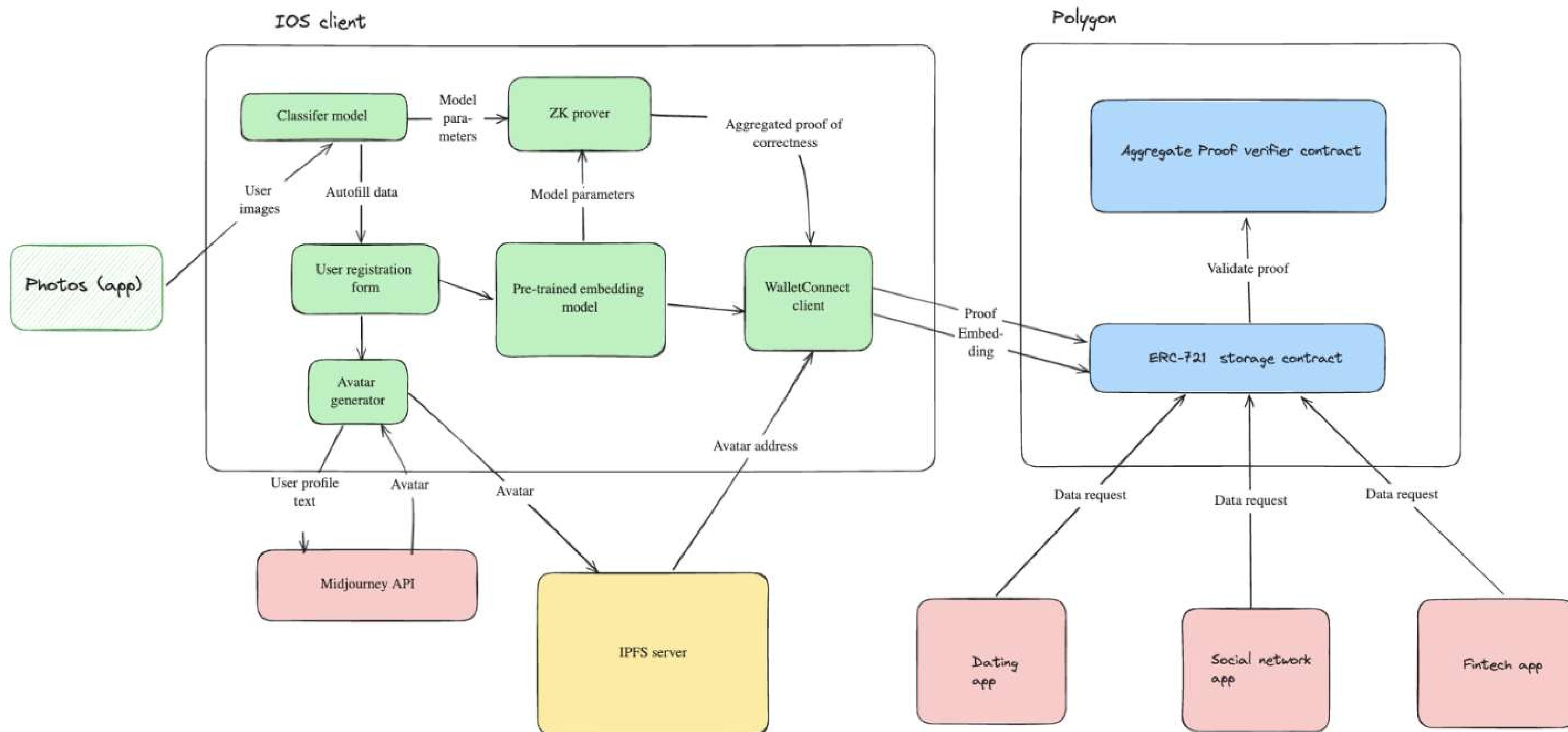
Challenges

- zkML is still in its infancy. We had to trade off accuracy for verifiability.
- Making embeddings truly private is an unresolved research problem.
- We have only considered on-device data due to time constraints and ignored valuable signals from external apps.

Next steps

- Enhancing embedding privacy with FHE (Lee et al., 2020; Badawi et al., 2020).
- Incorporating third-party data
- Integrating with decentralised identity solutions for user authentication
- Creating data pipelines for custom use cases

Solution diagram



TEAM



**Nikita
Kravchenko**

Business Development

University of Oxford,
ex-hedge fund analyst
at a crypto fund with
\$300M AUM



**Artem
Grigor**

Cryptography & ML

ex-Cryptography
Engineer at Aragon,
Ethereum Foundation
Grantee, UCL



**Galim
Usaev**

ML & CyberSecurity

UCL, Backend Python
Developer at Terra
Quantum,
ex-ML researcher at
Vision System Lab, IITP



**Maxim
Perekhodkin**

iOS Developer

ex-iOS developer at
Acronis,
ML-engineer at ICIE and
SberDevices

Thank you!

Contact us

 artem.grigor.23@ucl.ac.uk

 nikita.krvchnk1@gmail.com

 tg @Nikita_Kravchenko

 discord: fintech.dragoman