System Development Overview

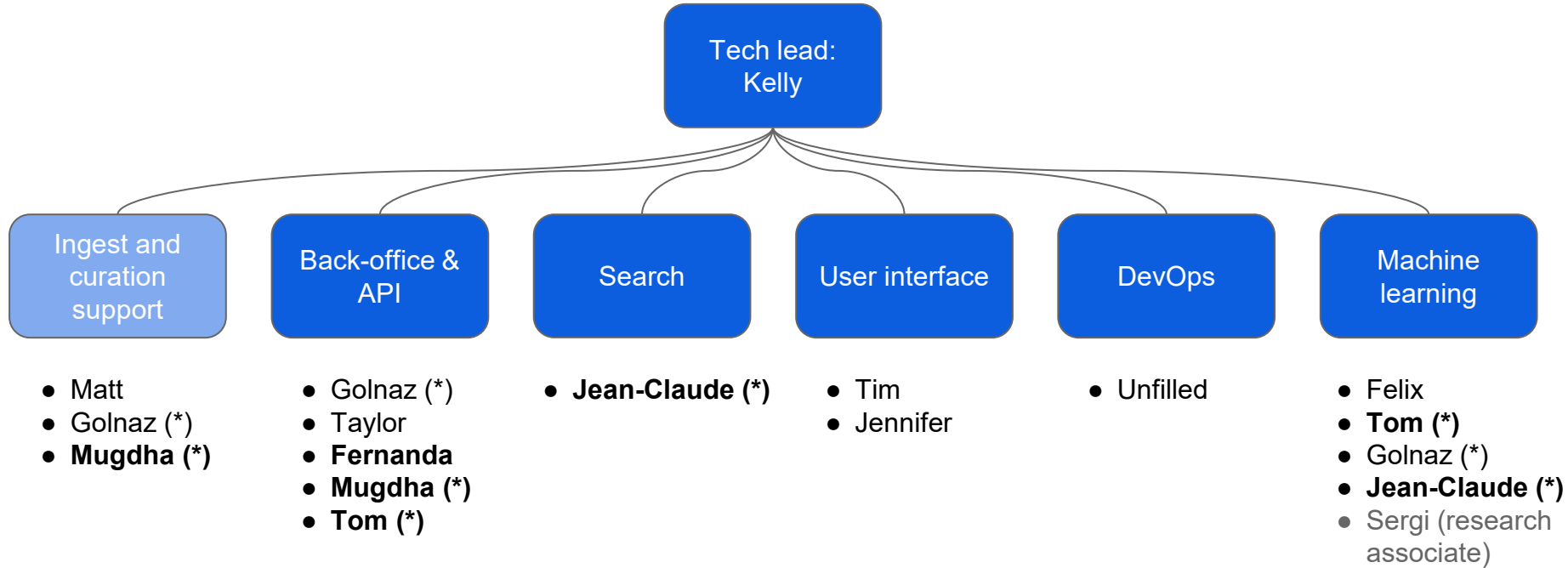*Kelly Lockhart and the ADS Team*

ADS Users Group Meeting, 16-17 Nov. 2023

System Development Overview

- Overview and management (Kelly)
- Backoffice (Taylor)
- User interface (Tim and Jennifer)
- Machine learning (Felix and Tom)
- Large language model experiments (Kelly)

Development org chart

Tech lead:
Kelly

| Ingest and curation support | Back-office & API | Search | User interface | DevOps | Machine learning |

- Matt
- Golnaz (*)
- **Mugdha (*)**

- Golnaz (*)
- Taylor
- **Fernanda**
- **Mugdha (*)**
- **Tom (*)**

- **Jean-Claude (*)**

- Tim
- Jennifer

- Unfilled

- Felix
- **Tom (*)**
- Golnaz (*)
- **Jean-Claude (*)**
- Sergi (research associate)

(Re)building the dev team

- Lost one more senior team member (tech lead)
  - Still associated with the team as a research associate

- Hired 4 developers (replacements and new positions):
  - Fernanda de Macedo Alves
  - Jean-Claude Paquin
  - Mugdha Polimera
  - Tom Allen
    - (transitioning from another role)

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Microservices, UI support

Search engine

Pipelines

Pipelines, ML support

Hiring challenges

- One position unfilled: DevOps Engineer
  - Not for lack of trying!
  - Need to explore other options
    - Automation
    - Develop internal devops skills
    - CfA institutional resources
    - Paid AWS support
    - Contracting firms

Managing a growing team

Team is now 11 people: nearly as large as the entire ADS team 5 years ago!

- Ongoing education and learning
  - Machine learning seminar
  - Peer programming sessions
  - Blue-sky retreat projects
  - External collaborations to assist with R&D
- Onboarding new team members
  - Developers Guide document
  - Github project templates