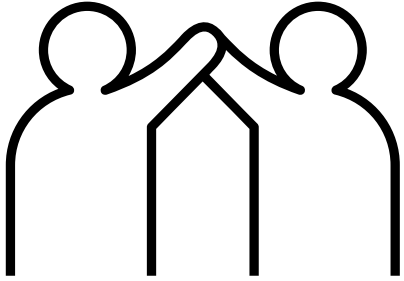


Putting the **ME** in Mainfra**ME**

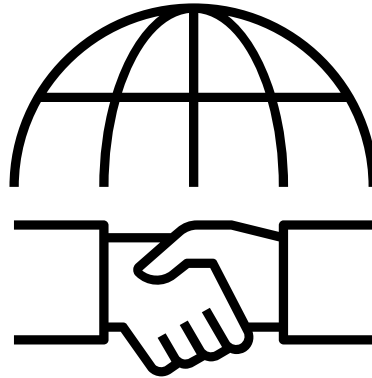
Advice for Students & Early-Tenure Mainframe Professionals

Arielle Goldberg
IBM Software Developer
arielle.goldberg1@ibm.com

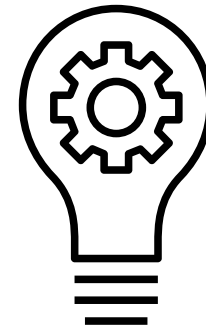




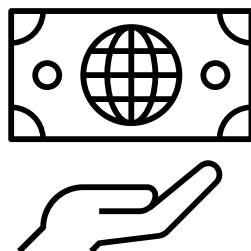
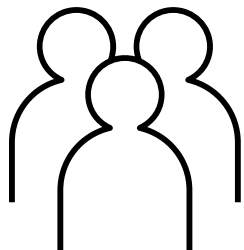
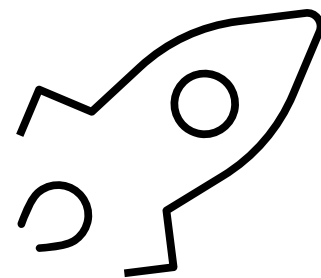
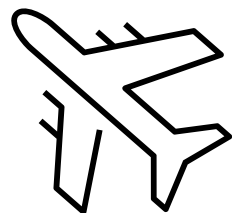
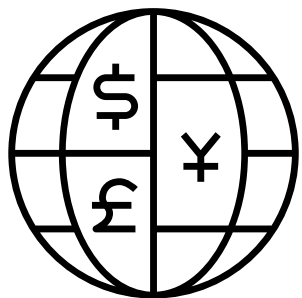
Make people's lives better

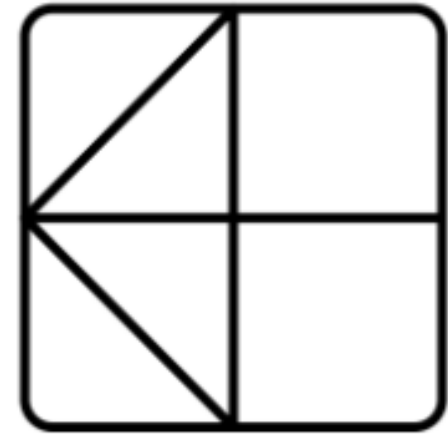
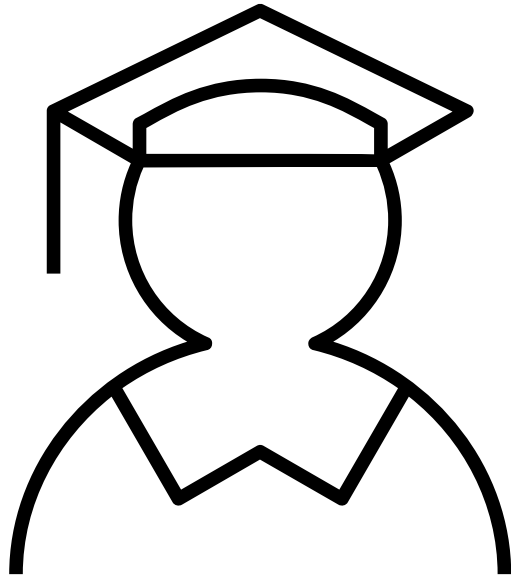


Do something meaningful



Work with innovative technology



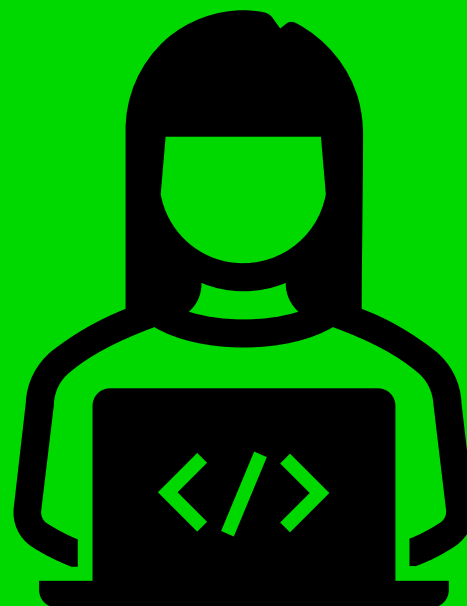


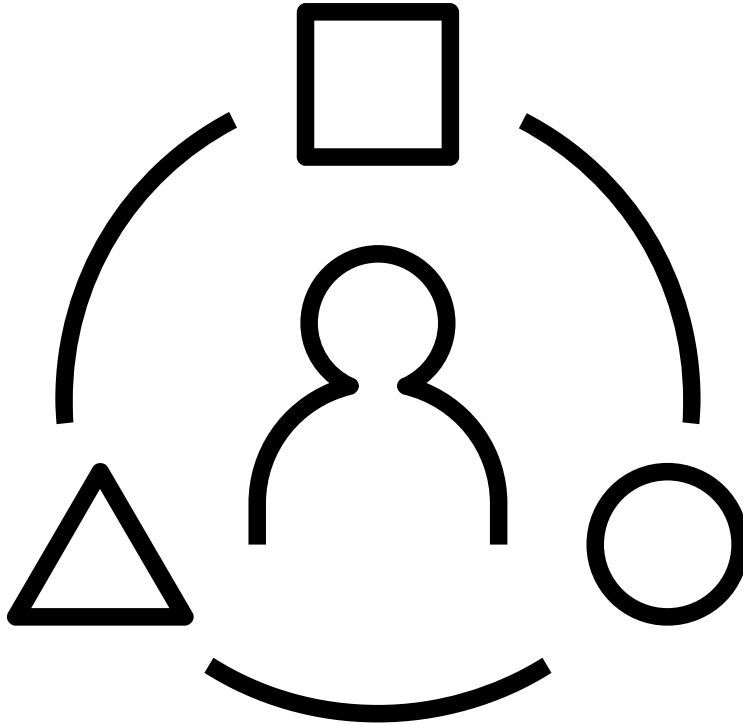
z17

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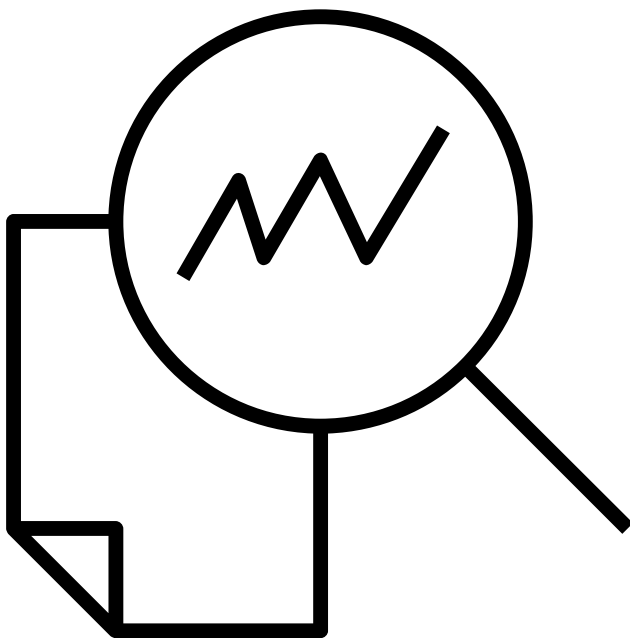
ENTER INPUT COMMAND:
  CPVOL ALLOC MODE(ESA) UNIT(0010) VFY(XASRES) -
ENTER INPUT COMMAND:
  TYPE((PAGE,10,99))
ICK00700I DEVICE INFORMATION IS CURRENTLY AS FOLLOWS:
-----
S
D
AD
TR
ICK04030I DE
ICK00703I
ICK03020
ICK030
ICK030
ICK030
ICK003D RE
U
ICK03000I CPVOL
CYLINDER
TYPE
-----
PERM      0      9      10
AS FOLLOWS:
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TAL

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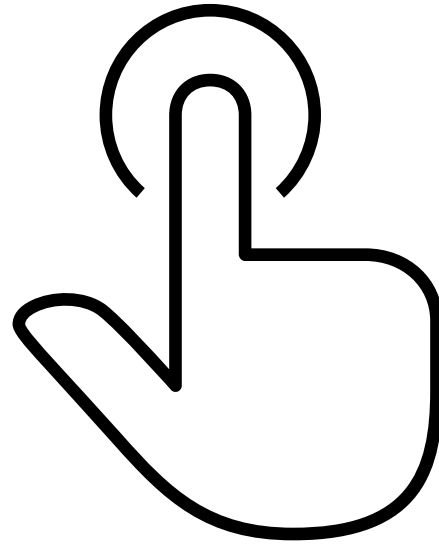




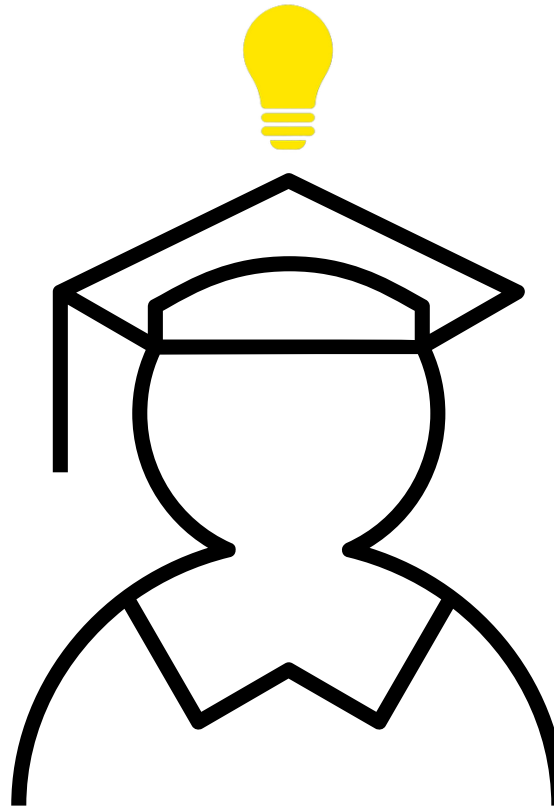
If there are users, there is a user experience.



The best decisions are based on data.



Display information to the users in a clear,
understandable, and actionable way



The most important thing to learn in college is how to learn.

Learn:

- how to be flexible
- how to learn new topics quickly
- how & when to ask for help
- how to find resources
- how to learn from a variety of styles
- how you work most efficiently
- time management
- teamwork & collaboration

What is a mainframe job?



**Chief
Executive
Officer**



**Chief
Information
Officer**



**Chief
Data
Officer**



**Chief
Financial
Officer**



**Chief
Information
Security
Officer**



**Chief
Sustainability
Officer**



**VP of
Infrastructure**



**Data
Scientist**



**Early-tenure
System
Programmer**



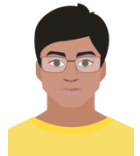
**Novice
Systems
Administrator**



**Security
Architect**



**Capacity
Planner**



**Infrastructure
Architect**



**Experienced
z/OS
Systems
Programmer**



**Enterprise
Architect**



**Site
Reliability
Engineer**



**Z IT
Operator**



**IT Systems
Manager**



**Z IT
Operations
Manager**



**Compliance
Evidence
Provider**



**Mid-level
System
Programmer**



**Database
Administrator**



**Application
Developer**



**Experienced
Application
Developer**



**Application
Architect**



**Cryptography
Expert**



**Senior
Systems
Administrator**

Navigating to Education Roadmaps

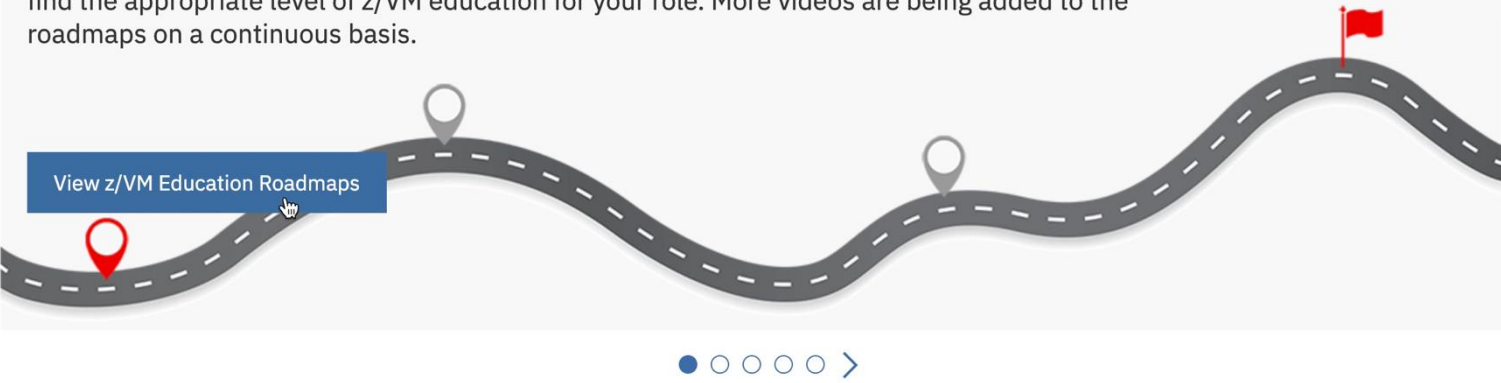
- z/VM
- News
- About z/VM
- Events calendar
- Products and features
- Downloads
- Technical resources
- Library
- How to buy
- Install
- Service
- Support
- Education
- Site map
- Site search
- Printer-friendly
- Notify me
- Contact z/VM

Last Updated: 13 January 2022

Welcome to the overview page for z/VM Education. The education content has been developed directly by the IBM z/VM Development organization, and is intended to be used by anyone that is interested in learning more about z/VM. Find a [z/VM video education roadmap](#) that delivers a custom level of instruction for your current role.

z/VM education roadmaps

New z/VM education videos are now available. These videos have been created by the IBM z/VM Development team along with others within the IBM zSystems organization. Videos range from basic introductory courses to more advanced z/VM topics. Several roadmaps have been created for you to find the appropriate level of z/VM education for your role. More videos are being added to the roadmaps on a continuous basis.



More z/VM education resources



Education Roadmaps

1. [Basic z/VM Knowledge Roadmap](#)

- *This track assumes you have little or no experience with the IBM mainframe, and your role will only require a basic knowledge of the product. The courses in this roadmap will touch on the basics, but will not include some of the advanced courses intended for z/VM System Programmers.*

2. [New z/VM System Programmer Roadmap](#)

- *This roadmap is intended to be followed by someone new to the IBM mainframe that needs to have a comprehensive knowledge of z/VM for their job. This education will start at fundamentals of z/VM and progress through the advanced topics. This is the longest roadmap and contains all education modules.*

3. [Experienced z/VM System Programmer Roadmap](#)

- *The advanced roadmap assumes you have previous IBM mainframe experience. Perhaps you have a background in z/OS and would like to learn more about z/VM. The education in this track skips some of the basic education found in the other roles.*

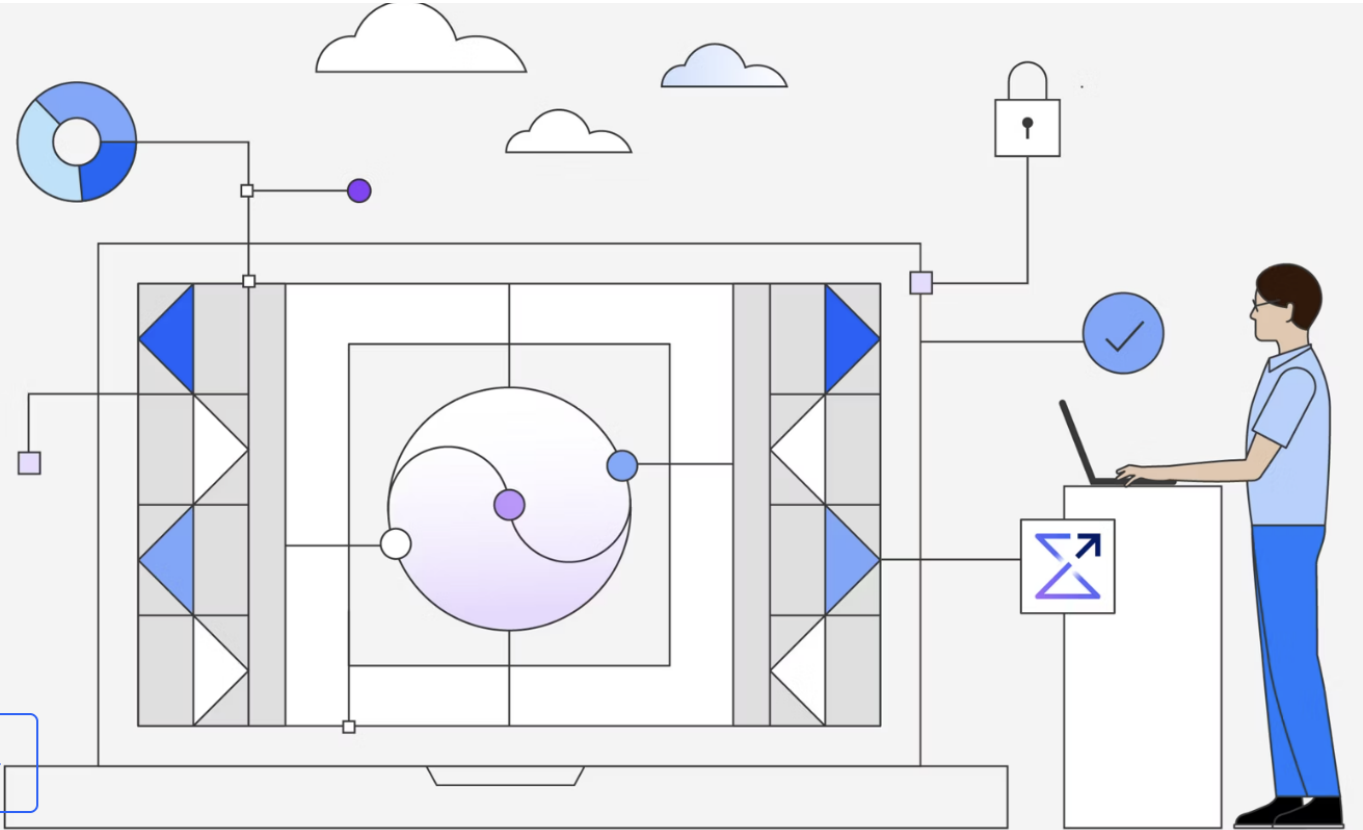
IBM Z Xplore Learning Platform

Learn industry-critical enterprise computing skills

Get started



Explore mainframe skills



- **Fundamentals and concepts:** Learn about data sets and coding languages such as JCL, Python and USS using the VS Code modern application. Get introduced to IBM Z security, enterprise scalability and more.
- **Advanced:** Get hands-on learning around REXX, COBOL, Linux®, VSAM, REGEX, JCL, Python, Db2® and more.
- **Extended:** Expand your skills with hands-on learning around TSO/ISPF, Node.js, machine learning, Ansible® and more.

<https://www.ibm.com/products/z/resources/zxplore>



Attending Conferences



GS UK WAVEZ

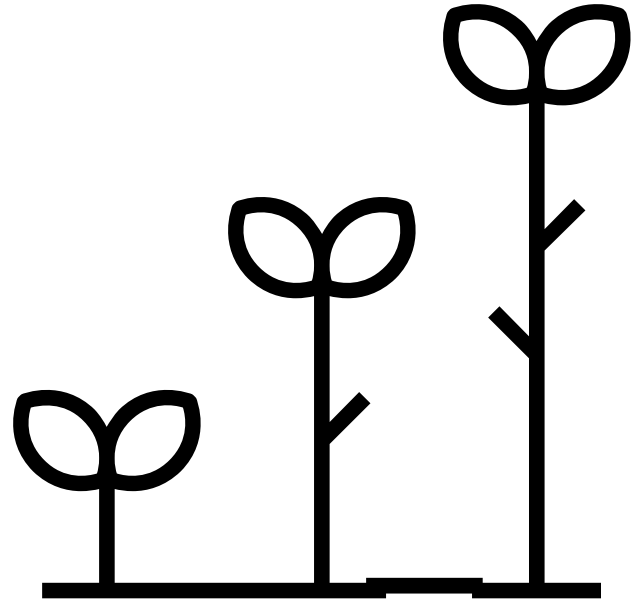
*Connecting and empowering the next
wave of aspiring mainframers*



VM Workshop

<https://www.ibm.com/support/pages/zvm/events/>





Get involved!

IBM Next

New Hires, Co-ops, Interns, Apprentices

What is IBM Next?

It is a grassroots centralized initiative for newer IBMer engagement across [North America](#). We encourage newer IBMers from all business units to get involved in the IBM community. It's run by newer IBMers, for newer IBMers.



Leadership Development Programs

IBM STAR

Leadership Development Program

STAR is a *global* leadership development program for *high performing talent*, aimed at *accelerating growth* and *shaping IBM's future leaders*.



Follow your passions!



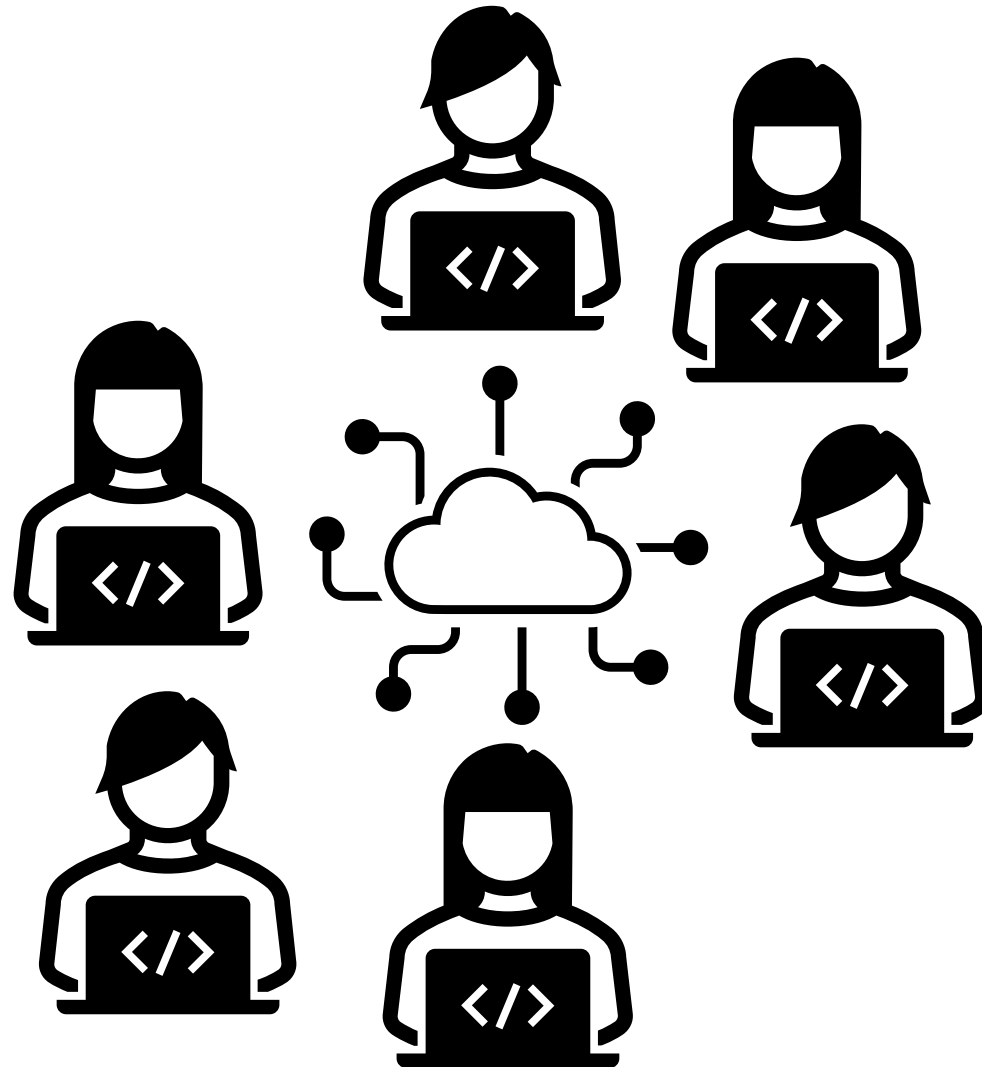
Arielle Goldberg

IBM
Verified email at ibm.com

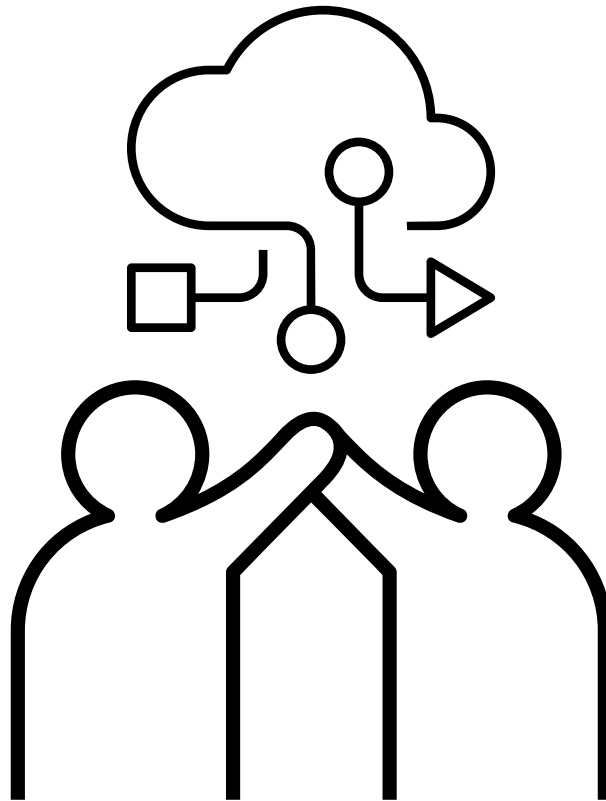
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TITLE	CITED BY	YEAR
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Bridging the Gap: Unifying HCI & ML Perspectives on Mutual Theory of Mind Z Ashktorab, D Bouneffouf, K Brimijoin, R Bellamy, M Campbell, ... International Joint Conference on Artificial Intelligence	8	2025
Expedient Assistance and Consequential Misunderstanding: Envisioning an Operationalized Mutual Theory of Mind JD Weisz, M Muller, A Goldberg, DAS Moran arXiv preprint arXiv:2406.11946	7	2024
Towards Personalized and Contextualized Code Explanations M Brachman, A Goldberg, A Anderson, S Houde, M Muller, JD Weisz Adjunct Proceedings of the 33rd ACM Conference on User Modeling, Adaptation ...	5	2025

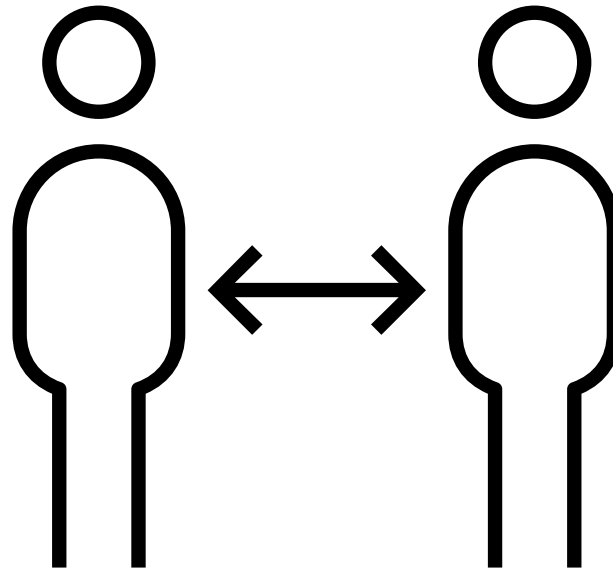
Participate in hackathons & challenges



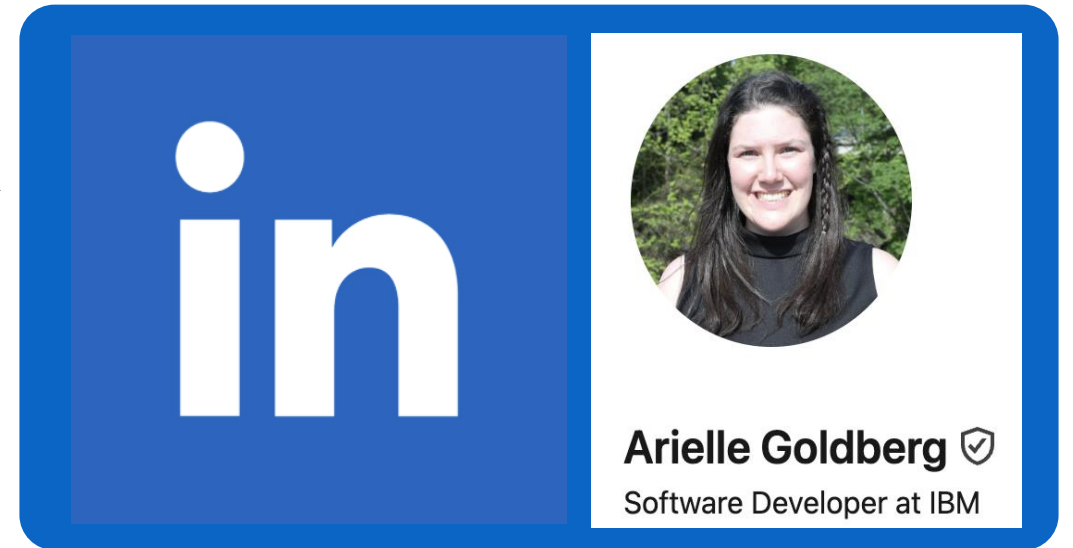
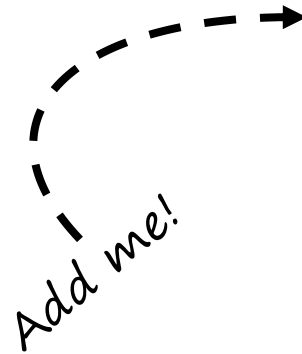
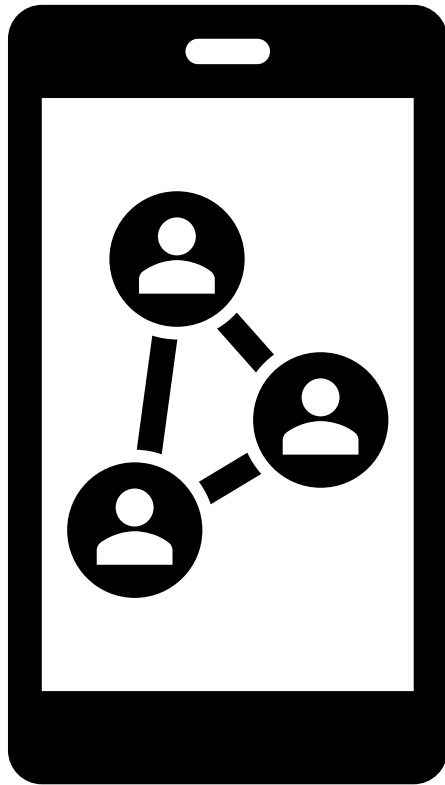
Get involved in open source communities



Find a mentor (or 2...or more!)

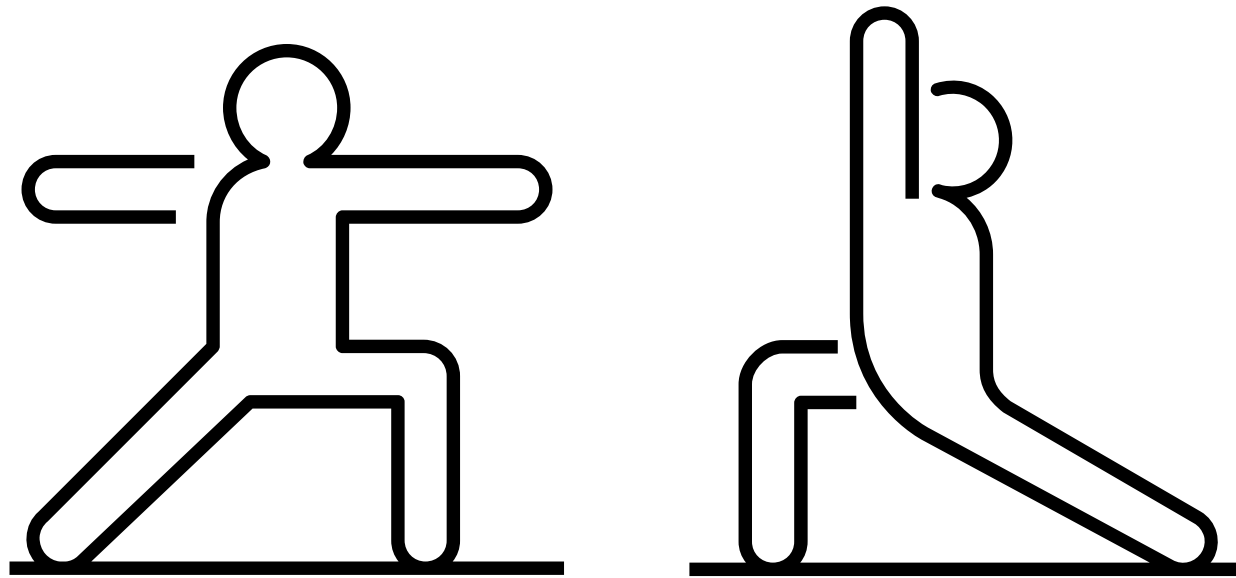


Build your virtual network

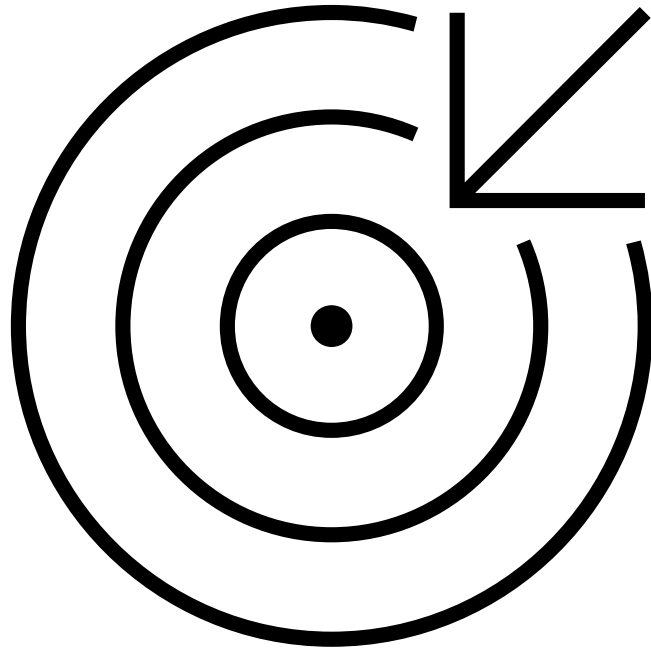


<https://www.linkedin.com/in/ariellemgoldberg>

Explore career flexibility, and be willing to take opportunities and try new things



Define what success looks like for you



Questions?

Comments?

Other advice to share?

Arielle Goldberg
IBM Software Developer
arielle.goldberg1@ibm.com



What is the best piece of advice you received?

What do you wish you knew when you were starting your career?

What is some advice you have for specifically early-tenure mainframers?

Bonus Conversation Questions

Wisdom & Lessons Learned

- "What is the best piece of advice you've ever received?"
- "What advice had the biggest impact on your career?"
- "What lesson took you the longest to learn?"
- "What's a piece of advice you once ignored but later realized was right?"

Looking Back

- "What do you wish you knew when you were starting your career?"
- "If you could go back to your first year, what would you do differently?"
- "What early mistake taught you the most?"
- "What would you tell your younger self?"

Bonus Conversation Questions

Growth & Success

- "What helped you grow the most early in your career?"
- "What separated you from others at a similar level?"
- "What habits or mindsets made the biggest difference for you?"
- "What is one thing people underestimate about succeeding in this field?"

Challenges & Pitfalls

- "What are common mistakes you see early-career professionals make?"
- "What's something people focus on that actually doesn't matter as much as they think?"
- "What nearly derailed your career, and what did you learn from it?"
- "What's a risk you took that paid off—and one that didn't?"

Bonus Conversation Questions

Career Direction

- “How did you decide what to specialize in?”
- “What signals told you that you were on the right (or wrong) path?”
- “What opportunities should early-career people say ‘yes’ to?”
- “How do you evaluate whether a role is a good career move?”

People & Influence

- “How important were mentors in your career?”
- “What makes a great mentor–mentee relationship?”
- “How did you build strong professional relationships early on?”
- “What’s one thing you wish more junior people understood about working with senior colleagues?”

Thank you