Level Up Your Engineering Career with Mentorship, Pairing, and AI

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What you’ll hear today

1. 🤝 Mentorship

2. 🍐 Pair programming

3. 🤖 AI tools for learning

👋 Hi, I’m Hana

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🤝Mentorship: Learn Faster by Learning Together

Technical topics - start

- Ruby/Rails to help build my first projects
- Onboarding to a new codebase
- Implementing specific feature
- Different parts of Rails/Ruby stack

Technical mentoring - advanced

- Special topics like:
    - Elegant and performant code
    - Rails/Ruby source code
    - Observability and incident investigations
    - New language(s)
    - Contributing to OSS

Career mentoring

- Understanding the field
- Understanding the company
- Reflections and feedback
- Career options
- Promotions
- Visibility

List of topics for mentees

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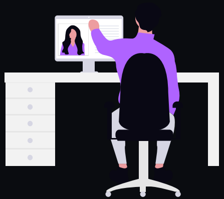

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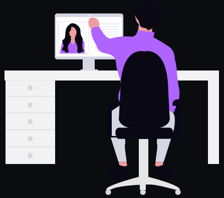

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Mentor & Mentee

- Setting up sessions for success
  - topics
  - expectations
  - time frame
- Preparing for sessions to maximise value

How to be a good mentor

- Read your notes before session
- Give contained tasks/readings
- Check with your mentee on the topics
- Bring your insights
- Be supportive

How to be a good mentee

- Prepare
  - Do readings/tasks
  - Write down questions
- Setup - even if just 5 minutes
  - Dev setup
  - Screens to share

How to find a mentor?

Why to mentor?

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You can do both!!!

🍐 Pairing

Progression

- Learning about the codebase
- Starting new work
- Debugging tricky problems
- Discussing used approach
- A PR walk-through

🤖 AI and learning

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Learning

- Overview and bigger picture
- Getting feedback fast
- Focused attention (learning)
- Repetition

Overview and bigger picture Visual Flow / Call Graph

“Generate a call graph or flow diagram (in text or mermaid) showing how control flows through this code: what gets called, in what order, and under what conditions. Label branches and outcomes.”

Overview and bigger picture
Understanding a Complex Function

"Rewrite this function in plain English. Describe the intent, inputs, outputs, main branches, error cases, and what side effects occur. Give me a simplified mental model of what this function is doing."

Overview and bigger picture
All in one

“Analyse the following code and give me a high-level overview of what it does. Then list every major execution path, including conditionals, function calls, and side effects. Present the flow as a clear step-by-step outline or diagram so I can understand the overall behaviour quickly.”

Getting feedback fast

“Review the following method. Give concise, high-impact feedback focused on:

1. **Readability** – is the intent clear? how to simplify?
2. **Performance** – any inefficiencies or unnecessary work?
3. **Elegance / Cleanliness** – idiomatic patterns, best practices, cleaner alternatives.
4. **Refactoring opportunities** – how to make it shorter, clearer, or more maintainable.
5. **Edge cases / pitfalls** – anything that might break.
6. A better alternative implementation, if appropriate.

Be direct, specific, and practical. Provide code examples for improvements.
Here is the method:”

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1. Re-reading books and notes
2. Recalling things from memory
3. Mini-testing
4. Underlining
5. Multitasking
6. Solving different problems

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To sum up, what tasks are good for AI to learn?

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Happy mentoring, pairing, learning

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What’s one thing you want to try?

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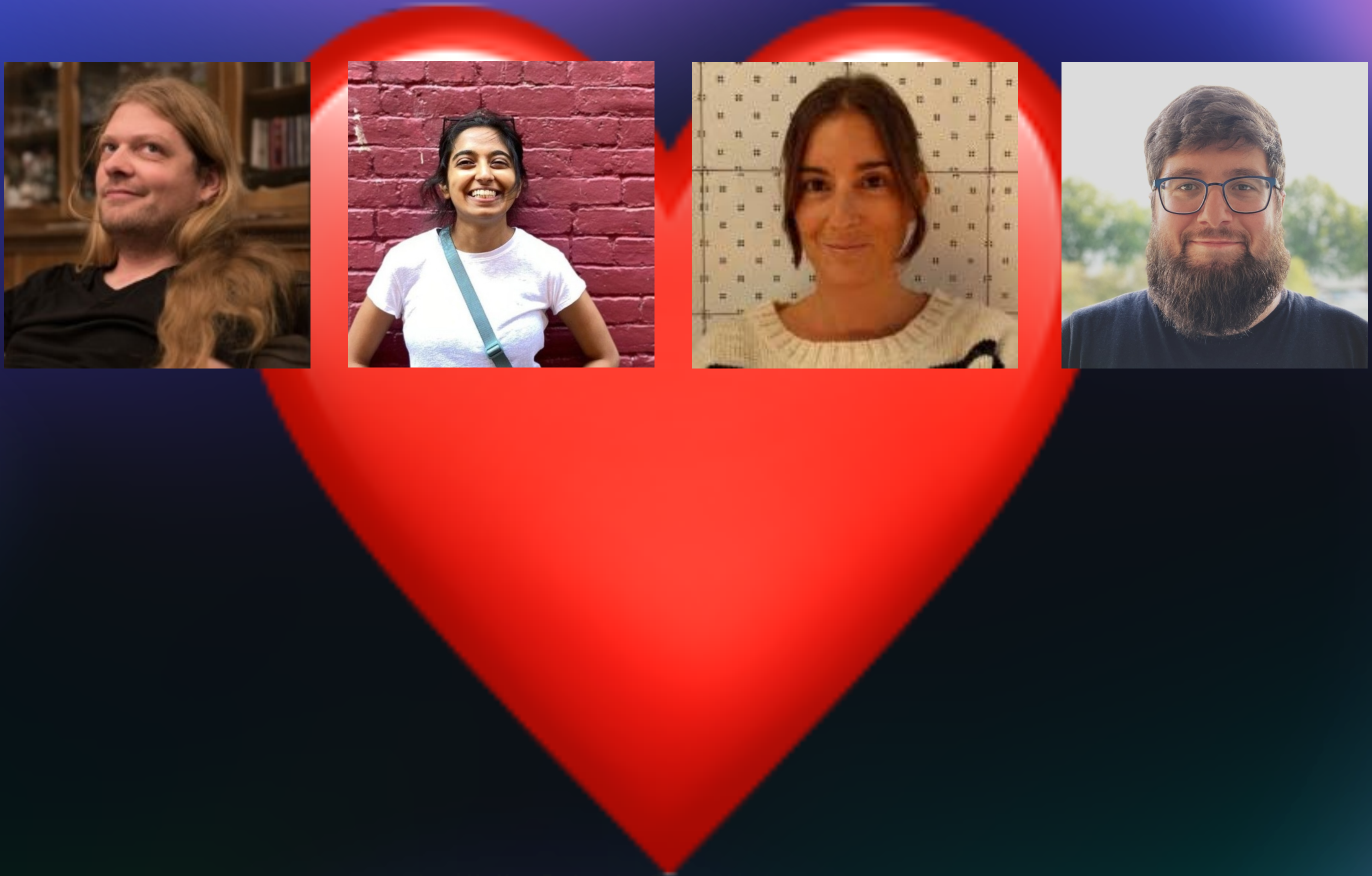

Thank you! Let’s stay in touch 😊

Hana Harencarova

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