Guest Speaker: The Rapid Evolution of AI

Summary

The guest deliver a great talk about the rapid evolution of AI, from the perspective of a Google employee. The speaker discusses AI's fast-paced advancements, current trends, potential impacts on jobs and society, and offers practical advice for individuals to adapt. The talk is structured in three main acts:

1. **Act I: The Relentless Progress of AI**
2. **Act II: Preparing for AI's Impact**
3. **Act III: Advice for you all**

Act One: The Relentless Progress of AI

- **AI as a Collaborator:** The speaker emphasizes thinking about AI not just as a new tool, but as a **relentlessly evolving collaborator** that learns and improves rapidly.
- **Rapid Intelligence Growth:** According to the **Artificial Analysis intelligence index**, AI's intelligence score has increased from about 10 to 70 in just three years (Nov 2022 to Nov 2025), indicating progress measured in **months or weeks, not years**.
- **Efficiency and Cost:** The cost of running AI per million tokens has dropped by approximately **1,000 times** in two years, while token processing speeds have increased from **25 to 350** tokens per second.
- **Leading AI Models:** The latest models from **Google and OpenAI** have outperformed in the ICPC (International Collegiate Programming Contest), with both achieving Gold medals.
- **Reasoning Models are the New Frontier:** The top 7 smartest models are all reasoning models. However, this implies longer response times and higher token consumption.
- **Coding Agent Evolution:**
  - *2021:* Coding Autocomplete (GitHub Copilot)
  - *2023:* Chatbot Assisted Coding (OpenAI ChatGPT)
  - *2025:* Coding Agent (Cursor)
- **Multimodal Capabilities:** AI now covers multiple modalities beyond text, including **speech, image, video, protein structures, satellite images, and medical imaging**.
- **Open Source vs. Proprietary Models:** Open-source models, such as **Qwen3**, are closing the performance gap with proprietary models, making AI more affordable and accessible.

Act Two: Preparing for AI's Impact

- **Phased AI Integration:**

Phase	Description	Timeline
Phase 1	Individual adoption of AI tools for productivity	Current
Phase 2	Deep AI integration into workflows	2 to 5 years
Phase 3	Autonomous AI agents collaborating with humans	5 to 15 years

- **Job Creation:** AI will create new roles, such as Chief AI Officer (CAIO), Prompt Engineer, AI Ethics Specialist, AI Product Owner, and AI Agent Architect.
- **Evolving Roles:** AI will cause jobs to evolve rather than simply disappear. For example, software engineers may shift focus from writing code to **building and integrating AI systems**.

Act Three: Advice for you all

Advice #1: Self-Awareness and AI Competency Assessment

- **AI Working Competency Life Stages:**

Life Stage	AI Skills Focus	Examples/Advice
Children (e.g., 10 years old)	Computational thinking and problem solving	Learn to decompose big problems into smaller parts.
High School Students	Critical thinking and auditing AI outputs	Evaluate AI responses critically; don't just consume the output.
College/Grad Students	Domain expertise + AI integration	Learn to combine AI tools with specific domain knowledge.
Professionals/Experts	AI orchestration and architecture	Design and integrate AI-powered systems and complex workflows.

- **Locate Your Position:** Individuals should **realistically locate themselves in the AI value chain** based on their current skills, interests, and resources.

Advice #2: Practice, Practice, Practice

- **Practice Framework: The Hammer and Nail Analogy**

Practice Element	Description
Practice the Hammer	Regularly use AI tools; master prompting and understand tool capabilities.

Practice Element	Description
Find the Nail	Identify real, challenging problems to solve using AI.
Build an Agent	Develop simple AI agents or workflows to automate tasks.

- **Curiosity is Key:** Stay curious about new developments.
- **Efficiency in AI Use:** Choose the right AI tool for the specific task and cross-check outputs from multiple sources to ensure reliability.