Artificial Intelligence 201

BEYOND WRITING EMAILS

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INTRODUCTION TO J. LANGLEY

What I do:

- Chief Technical Officer - CohesionForce, Inc
- Founder - Huntsville AI
- AI Huntsville - Workforce Development Committee
- Captain - Keel Mountain Volunteer Fire Department

I've been working with AI since around 2005, with my master's project at Florida Institute of Technology being an NLP based system for recommending web forum channels that best match a user's question.

I believe that the best way to ensure that AI is used for the greater good is to involve the greatest number of perspectives possible in its development, testing, and use.

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LEVELS OF AI ADOPTION

1. Using AI without knowing it - Email spam filter, map navigation, voice recognition, social media feeds

2. **Actively using AI - ChatGPT, Copilot, other tools we'll cover in a moment**

3. Building AI Tools - Incorporating AI tools into products, training custom AI models, applying AI in new domains

4. Designing new AI models or approaches - Understanding how current AI models work, creating new AI models

AI TECHNIQUES

1. Natural Language Processing - Classification, Summarization, Generation
2. Computer Vision - Classification, Segmentation, Enhancement, Generation
3. Audio Processing - Recognition, Classification, Generation
4. Reinforcement Learning - Autonomous Vehicles, Robotics, Optimization
5. Recommendation Systems - Collaborative Filtering, Content Based, Implicit
6. **Generative AI - Text, Images, Audio, Video**
7. Agentic AI - Tool Calling, Decision Making
8. Robotics - Humanoid Robots, Autonomous Drones, Self Driving Cars

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GENERAL GUIDELINES

- You are responsible for checking the correctness of any output.
- Be as specific as possible.
- It's called "Prompting" for a reason.
- Feel free to use AI to build better prompts.
- If it's not good enough, check back in a month.

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DISCUSSION OUTLINE

To give us a framework for this discussion, we will center around a boutique jewelry store in Huntsville. The store is planning an upcoming sale and needs a strategy, images, and video for a marketing campaign.

We'll use:
- Deep Research to develop a strategy
- Image Genaration to create images for social media
- Video Generation to create videos for social media
- Text to Audio to create voice over for the video

Along the way, we'll pause and discuss how each of these might be useful in your daily life.

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DEEP RESEARCH

Most chat tools now provide a "Research" option that provides a much longer output.