AFSA45
INTRODUCTION TO AI FOR BEGINNERS
Alan Johnston,
Hydratec, Inc.
SAN ANTONIO, TX
AFSA
American Fire Sprinkler Association

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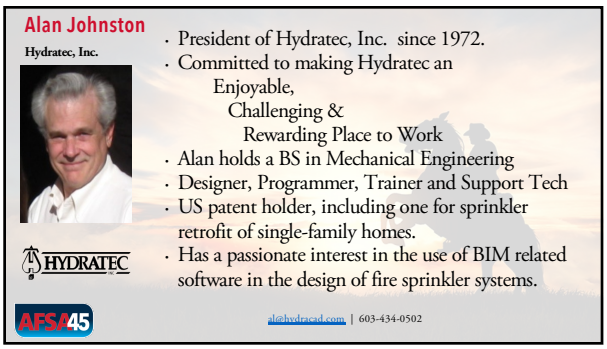
Alan Johnston
Hydratec, Inc.
HYDRATEC
· President of Hydratec, Inc. since 1972.
· Committed to making Hydratec an Enjoyable, Challenging & Rewarding Place to Work
· Alan holds a BS in Mechanical Engineering
· Designer, Programmer, Trainer and Support Tech
· US patent holder, including one for sprinkler retrofit of single-family homes.
· Has a passionate interest in the use of BIM related software in the design of fire sprinkler systems.
AFSA45
al@hydratec.com | 603-434-0502

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HOUSEKEEPING ITEMS
TO RECEIVE CREDIT FOR THIS SEMINAR, YOU MUST:
1) scan badge upon entry,
2) attend seminar in its entirety, and,
3) submit evaluation within 14 days
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National Fire Protection Association
The authority on fire, electrical, and building safety
DISCLAIMER
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Any opinion expressed is the personal opinion of the author and presenter and does not necessarily present the official position of the NFPA and its Technical Committees.
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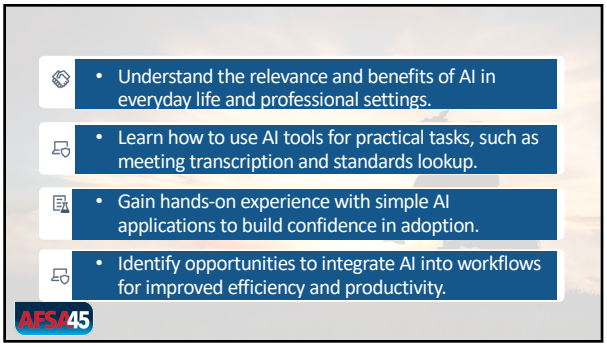
• Understand the relevance and benefits of AI in everyday life and professional settings.
• Learn how to use AI tools for practical tasks, such as meeting transcription and standards lookup.
• Gain hands-on experience with simple AI applications to build confidence in adoption.
• Identify opportunities to integrate AI into workflows for improved efficiency and productivity.
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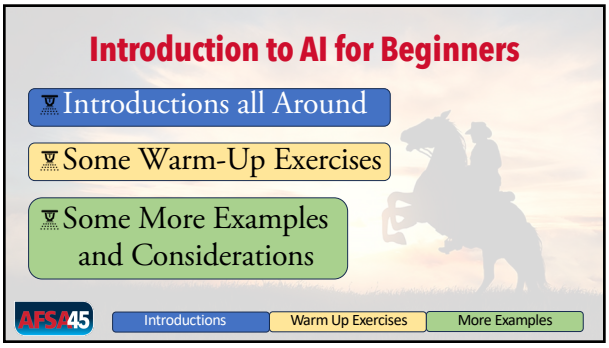
Introduction to AI for Beginners
Introductions all Around
Some Warm-Up Exercises
Some More Examples and Considerations
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Introductions
Warm Up Exercises
More Examples

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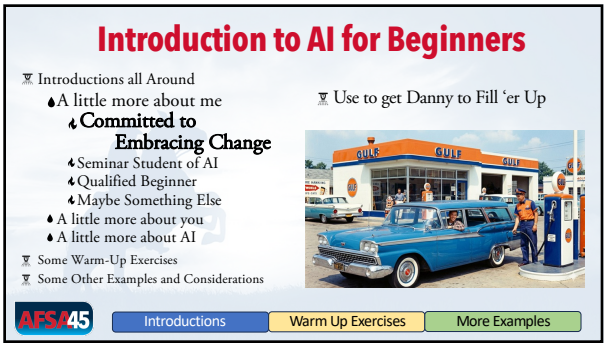
Introduction to AI for Beginners
Introductions all Around
A little more about me
Committed to Embracing Change
Seminar Student of AI
Qualified Beginner
Maybe Something Else
A little more about you
A little more about AI
Some Warm-Up Exercises
Some Other Examples and Considerations
Use to get Danny to Fill 'er Up
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Introductions
Warm Up Exercises
More Examples

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Introduction to AI for Beginners

- Introductions all Around
  - A little more about me
    - Committed to Embracing Change
    - **Seminar Student of AI**
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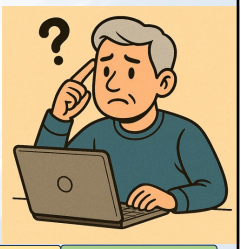

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Image generated by A. Johnston using M365 Copilot / GPT-5, July 2026.

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Introduction to AI for Beginners

- Introductions all Around
  - A little more about me
  - **A little more about you**
    - What brought you to this class
    - What AI experiences might you share
    - Can you picture yourself as a frequent user
  - A little more about AI
- Some Warm-Up Exercises
- Some Other Examples and Considerations

- What brought you to this class?
- What AI experiences might you share?
- Can you picture yourself as a frequent user?

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Introduction to AI for Beginners

- Introductions all Around
  - A little more about me
  - A little more about you
  - **A little more about AI**
    - AI players & business model
    - Accelerated Inference
    - A process of organizing data
    - Access to almost limitless data
- Some Warm-Up Exercises
- Some Other Examples and Considerations

Just google …

- **ChatGPT** – free just google it
- **Gemini** (by google)– free basic paid subscription for more features
- **Copilot** (by Microsoft) – free basic, paid part of Office 365, Upgraded Pro version for more money
- **Perplexity** Free basic then subscription
- **Grok** – free basic then subscription
- **Claude** – free basic the subscription

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AI = Artificial Intelligence

or better yet…

= Accelerated Inference

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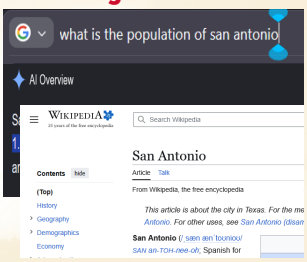
Introduction to AI for Beginners

- Introductions all Around
- **Some Warm-Up Exercises**
  - **Google --> AI**
    - **Just "Google It" is now Gemini**
    - How old is? How Rich is? Where is?
    - Technical Questions?
    - All answers subject to Facebook
  - AI Applied to Specific Data
  - AI Applied to Your Data
- Some Other Examples and Considerations



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- Some Other Examples and Considerations

- What is the min and max allowable deflector distance down from the ceiling for a CMSA sprinkler?
- What is the min and max allowable deflector distance down from the ceiling for an ESFR sprinkler?
- What is the required Suction and Discharge pipe size for a 1000 gpm fire pump?

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- Some Other Examples and Considerations

- Remember… Accelerated Inference scourers vast amounts of data and delivers the best pattern match it can find.
- Do you want that data to come from:
  - You Tube?
  - Facebook?
  - Twitter?
  - Tik Tok?

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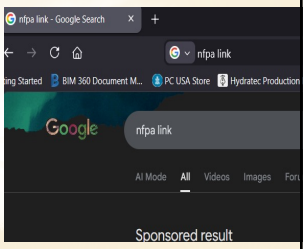
Introduction to AI for Beginners

- Introductions all Around
- Some Warm-Up Exercises
  - Google --> AI
  - **AI Applied to Specific Data**
    - **NFPA Link**
      - Google 'NFPA Link'
    - Technical Questions Revisited
    - Website Chatbots
  - AI Applied to Your Data
- Some Other Examples and Considerations



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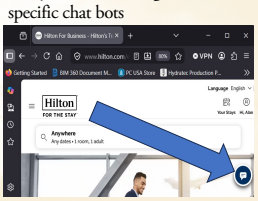
    - NFPA Link
    - Technical Questions Revisited
    - **Website Chatbots**
  - AI Applied to Your Data
- Some Other Examples and Considerations

- Many sites are starting to use site specific chat bots



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- Some Warm-Up Exercises
  - Google --> AI
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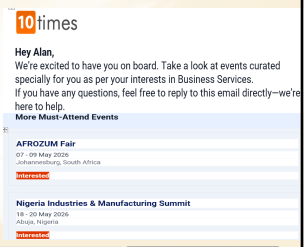
  - **AI Applied to Your Data**
    - **Dictate an email response & clean it up**
    - Teach a lesson and write it down
    - Record a meeting and create a summary
- Some Other Examples and Considerations



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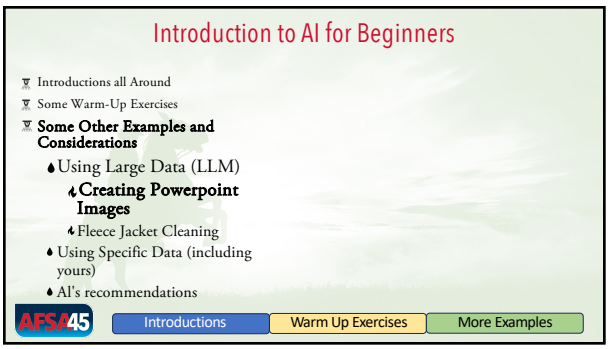

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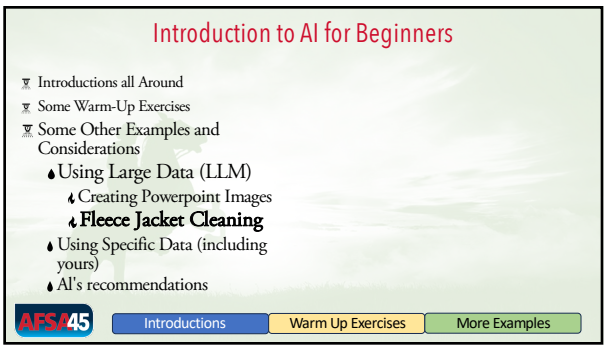

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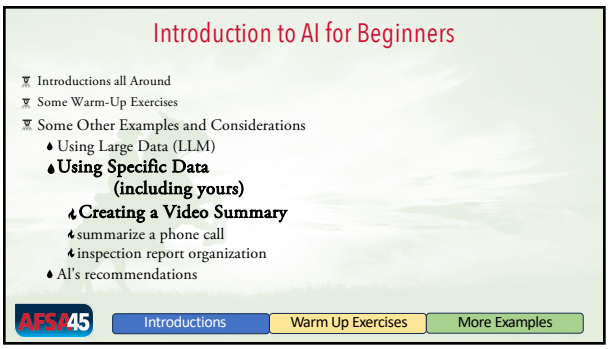

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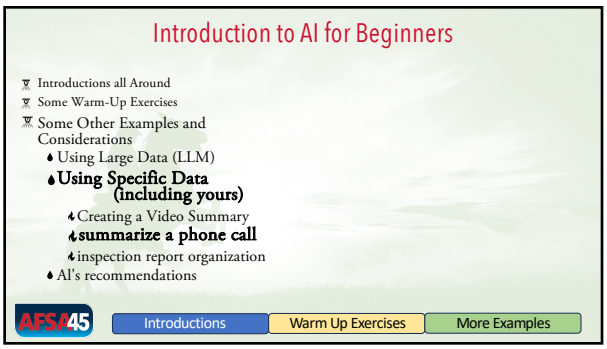

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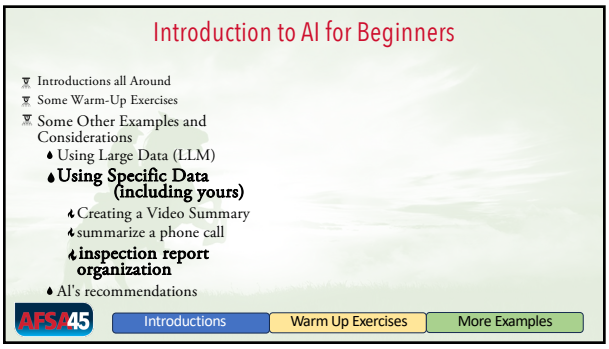

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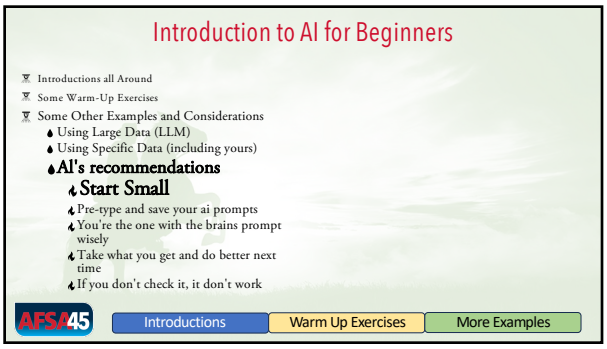

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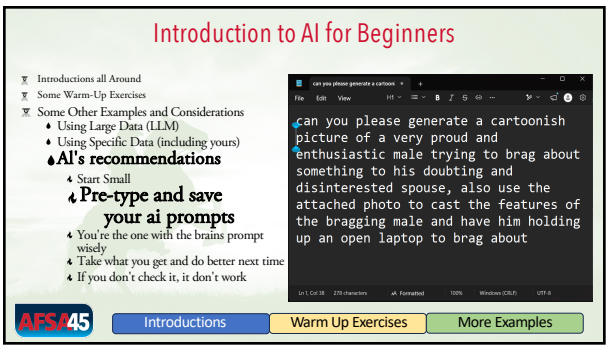

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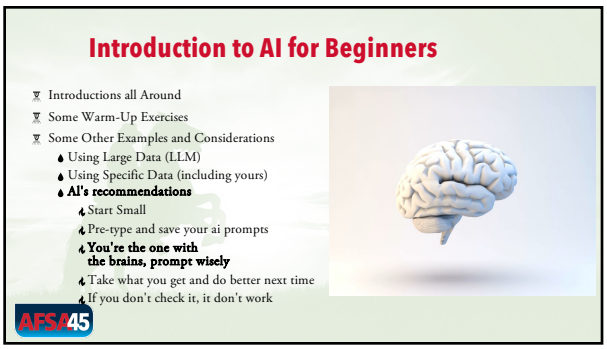

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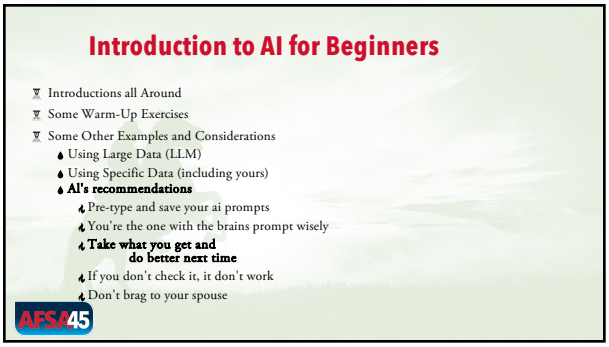

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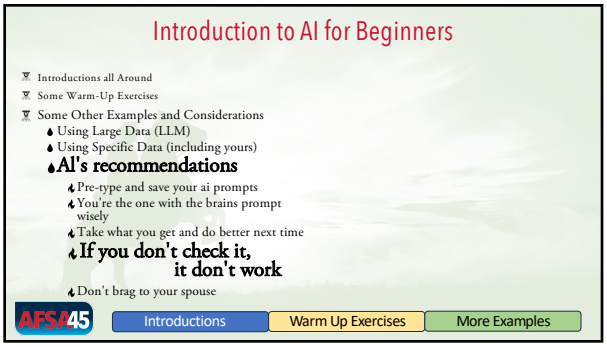

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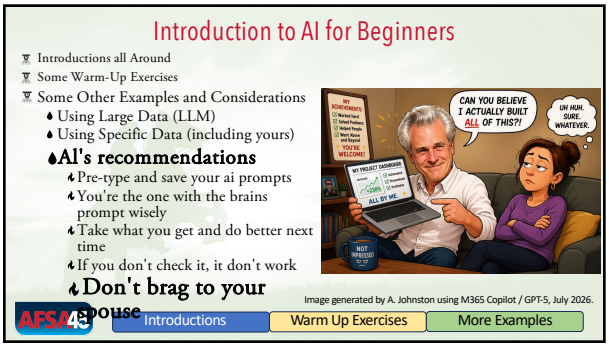

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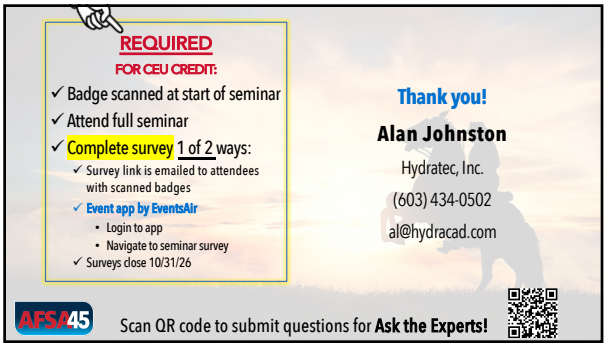

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2027 Training Schedule

WEBINARS

1/6	Updates to NFPA 20
1/20	Calculating Pressure Reducing Hose Valves
2/3	Consumer Alert: Nitrogen in Sprinkler Systems
2/17	Reviewing Hydraulic Calculations
3/3	Updates to NFPA 13, 2028 Ed.
3/17	Updates to NFPA 13R & 13D, 2028 Eds.
4/7	Topic Coming Soon
4/21	NFPA 25: Roles & Responsibilities
5/5	Standpipe Flow Test Procedures
5/19	Storage 101
6/2	NFPA Technical Meeting - Voting Guide
6/16	Topic Coming Soon
6/30	Topic Coming Soon
7/7	Updates to NFPA 14, 2027 Edition
7/21	Adjacent Hazards & Design Methods
8/4	Acceptance Testing
8/18	Modifications to Existing Systems
9/22	Topic Coming Soon
10/6	Seismic 101
10/20	Proposed Updates to NFPA 25, 2029 Ed.
11/3	Evaluating Fire Pump Flow Tests
11/17	Top 10 Tech Reviews
12/1	Designing Water Storage Tanks
12/15	Pump Room Layout

PROGRAMS

Feb 9 - Mar 5 Apr 20 - May 14 Aug 3 - Aug 27** Oct 26 - Nov 19	Beginning Design School*
Apr 26 - May 7 Nov 1 - 12	Intermediate Design School*
Feb 8 - 10** Apr 12 - 14 Jul 12 - 14 Oct 11 - 13	Sprinkler Hydraulics Calculations Workshop
Apr 19 - 21 Oct 18 - 20	Advanced Hydraulics Calculations Workshop
Feb 11** Apr 30 Jul 23 Sep 24	Introduction to the Fire Sprinkler Industry
Mar 1 - 3 May 17 - 19 Aug 16 - 18 Oct 18 - 20**	NFPA 25 Essentials Workshop
Jun 7 - 10 Sep 20 - 23	Experienced Inspector Skills Lab
Mar 4 - 5 May 20 - 21 Aug 19 - 20 Oct 21 - 22**	NFPA 25 Fire Pump Workshop
Spring Summer Fall	ITM Inspector Development Program* *This program is 20 months.*

** Hybrid course **At General Air Products Lab, Exton, PA*

AFSA46

September 8-11	Manchester Grand Hyatt San Diego, CA

For More Details Visit:
firesprinkler.org

AFSA
American Fire Sprinkler Association

Dates subject to change. Programs subject to minimum registrations.

rev 9/14/2026

Virtual Instruction Path (VIP)

for Sprinkler Fitting Apprentices

Level 1 - Begins January 2027

Level 2 - Begins February 2027

Level 3 - Begins January 2027

Level 4 - Begins March 2027

www.firesprinkler.org/VIP

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HANDS-ON WORKSHOPS FOR 2027

FEATURING AFSA'S TRAINING LAB

NFPA 25 Essentials Workshop

Mar | May | Aug | Oct

Description: Understand roles, responsibilities, and NFPA 25 ITM procedures through hands-on testing of wet systems, dry systems, and fire pumps.

NFPA 25 Fire Pump Workshop

Mar | May | Aug | Oct

Description: Develop practical NFPA 25 fire pump ITM skills, including no-flow and full-flow testing, water supply graphing, and performance evaluation.

Introduction to the Fire Sprinkler Industry

Feb | Apr | Jul | Sep

Description: This course is designed for those new to the industry. An introductory, wide-ranging 8-hour course that provides a broad overview of core fire sprinkler industry concepts for those new to the field.

Experienced Inspector Skills Lab NEW

Mar | Sep

Description: Take your ITM expertise beyond the basics. Designed for experienced technicians, this course combines focused classroom instruction with hands-on system lab training to strengthen your application of current NFPA 25 inspection, testing, and maintenance requirements. Refine fire sprinkler testing practices, improve documentation, deliver more consistent service, and help reduce liability while reinforcing knowledge commonly covered on certification exams.

Learn more about AFSA's fire sprinkler lab featuring functional risers, a spray room, fire pumps, and an interactive classroom.

firesprinkler.org/lab