# Certain Growth

Data Scientists / AI Engineers

Thom Ives, Ph.D.
Founder, Integrated Machine Learning & AI
Senior Data Scientist, Echo Global Logistics

#### What Are We To Do?

- No single person can keep up with the growth of advanced math and its applications, the coding, and the technology that data science and AI are experiencing.
- After seeking to carefully mentor and help people entering our field from all over the world, I've first looked to direct them to good existing materials.
- Then, I stay on the lookout for holes in the educational space. I then try to prioritize filling those holes that I can best fill and that seem most beneficial.

To that aim, my best overall advice is the following ...

### **Your Outermost Circle**

# Be Humble

#### Your Next Circle Inside That

- Always Be Learning
  - From Everyone AND From Everything
  - Pace Yourself ... *Rest* ... And Then "Get Back To Work"
  - Develop GOOD Philosophies For ALL Areas Of Your Life
- Seek Balance, But Do NOT Expect It
  - Balance Is An Illusion
  - MAINTAINING Balance Takes Work
  - Seek SUPER Health In All Aspects Of Your Being

EXAMPLE: Working 16 hour days on 6 hours sleep will *NOT* make you a great DS.

## Your Data Science / Al Engineering Circle

Think In Terms Of Decades And Not Just Years

"We overestimate what we can do in a year, and underestimate what we can do in a decade."

- MASTER THE BASICS = FOUNDATIONS
  - The Best Minds AND Masters Have Built STRONG Foundations They MASTER The Basics
  - Great Innovators / Champions Are VERY Good At The Basics = Foundational Skills

# Unique Emphasis Number 1

# Become A Master Integrator

- Great Innovations Are OFTEN Great Integrations Of VERY Ingenious Parts That Work GREAT Together
- Allow Others That Catch Your Vision To Work With / Help You Integrate BRILLIANT PASSIONATE People Into Your Visions
  - o This WILL Be Messy, BUT If You Learn To Do It Well, You Can Do MUCH GREATER THINGS!
  - Expect Some Heartache With This, BUT Seek To Grow Your Skills In People Integration
  - MORE TOGETHER Does A Lot To Inspire Others

## Unique Emphasis Number 2

# Build Unique Valuable Skills

- Find Out What Is Needed AND Find A Way To Provide It
- BE HUMBLE AS YOU BUILD
  - o REALLY Consider Inputs EVEN IF The Inputs Seem Weird Discern Why That Input Was Given
  - Collect Feedback From YOUR MARKET ASAP
    - You MUST Become A Good Salesman
    - You MUST Listen To ALL Your Customers To KNOW What Is Best To Build / Create / Solve

# An Introduction To "HOPEFULLY" A New Unique Skill

# How To Serve Analytical Tools To Your World

- Once You Know A Needed Analysis, Serve It To Your World With Python FastAPI
- Be Patient With Yourself As You Learn It
- Keep Finding Ways To Make Better APIs
- Find Better Ways To Deliver And Use Your APIs

#### Three FastAPI APIs

- A Linear Model Serving API
  <a href="https://github.com/ThomIves/Basic\_Model\_Serving\_With\_FastAPI">https://github.com/ThomIves/Basic\_Model\_Serving\_With\_FastAPI</a>
- A SQL Interface API
- ➤ A File IO API