Insight AI Program
Program Overview and Interview Process

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Roadmap

1. AI Program
2. Transferable Skills
3. Main Interview
4. Best Practices
5. Questions
AI Program
Broad Field of Data

- Data is everywhere, and it's growing
- Specialization also on the rise
  - Data Analyst
  - Data Scientist
  - Research Scientist
  - AI Researcher/Engineer
  - Machine Learning Engineer (MLE)
  - Data Engineer
  - DevOps Engineer

Most common roles out of the AI Program (MLE most in-demand)
AI Program

• Intensive 7 week full-time project-based training
• Self-directed, collaborative learning
• Develop technical and professional skills for positions such as AI Researcher, AI Engineer, and Machine Learning Engineer
• Scholarships available: insightfellows.com/scholarships
• No PhD requirement
AI Program

- Intro and Project Ideation: Week 1
- Project Phase: Weeks 2-4
- Interview Preparation: Weeks 5-7
- Job Interviews
Transferable Skills
What do AI Researchers and ML Engineers do*?

- Follow developments in domain-relevant literature
- Meet with stakeholders, align business goals with technical plan
- Acquire and label data
- Architect models and/or apply transfer learning
- Train, track, and maintain models
- Collaborate on code reviews and code testing
- Deploy models, containerize code, build APIs/microservices
- Communicate technical results to broader team
- Work with Data Engineers to ensure scalability

*More on the specific roles later
The AI Researcher and ML Engineer

Machine Learning and Deep Learning
- Supervised learning
- Unsupervised learning
- Neural Network architectures in NLP, CV, RL, AE
- Regularization, loss functions, optimization, evaluation
- Frameworks, e.g. TensorFlow and PyTorch
- Probability
- Statistics
- Linear Algebra
- Experimental design

Computer Science and Software Engineering
- Computer science fundamentals
- Software engineering best practices, e.g. OOP, version control, unit testing, CI/CD
- Scripting language, e.g., Python
- Compiled language, e.g. C++
- API and microservice design
- Cloud services, e.g. AWS
- Databases, e.g. SQL

Domain Knowledge and Professional Skills
- Conveys passion for the business
- Deconstructs a problem strategically
- Fills-in gaps in knowledge proactively
- Starts with the raw data and EDA
- Explains assumptions, considers alternatives
- Collaborates, works towards team goals
- Demonstrates creative thinking

Communication and Visualization
- Starts with clearly defined user need
- Tells story, how the technology addresses need
- Resonates with diverse audience, e.g. senior management
- Relates technical constraints/ goals to business constraints/ goals
- Demonstrates thoughtful design and aesthetic, e.g. for data visualizations
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*Importance often overlooked*
The AI Researcher and ML Engineer

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*Bigger emphasis*
The AI Researcher and ML Engineer

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Main Interview
Process

• Apply through apply.insightdatascience.com
• Main Interview (30 minutes)
  • Chat about background and previous work
  • Discuss a paper sent to you in advance
  • Present a recent project, with code
    (preferably not course-related)
• Q&A
• Coding Challenge
• Final Interview (15-30 minutes)
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- Be concise and clear
- Start big picture, then get specific
- Keep it conversational
- Anything in your background is fair game
- STAR(T): Situation, Task, Action, Results, Takeaway
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- What problem were the authors trying to solve?
- What was the shortcoming of the previous approach?
- How does the new approach address that?
- What are the limitations?
- What did you think of the paper?
  etc...
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- Product focus - what problem are you trying to solve, and who are you solving it for?
- Highlight key pieces of code
- What did you learn from EDA?
- Why did you choose your model?
- How did you evaluate the model?
- How did/ would you deploy?
- What would you do if you had more time?
- Keep it conversational
- Mind the time
Best Practices
Food for Thought

• Understand this career transition
  • Why AI?
  • Look at blogs, companies, industries, job boards etc.
• Treat the interview as a two-way conversation
• Demonstrate thoughtful choices
  • Choosing the right tool for the job
  • Providing context around alternatives
Questions

Final application deadline: July 27th
Session starts: September 14th
Apply: apply.insightdatascience.com

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