Career Advice

Bryan Cafferky

https://github.com/bcafferky/shared

About Bryan Cafferky…

- Data & AI Consultant.
- Author of **Master Azure Databricks Step By Step**, an in-depth training book, available on Amazon.
- Creator of a popular Data and AI YouTube training channel with over 37k subscribers.
- Author of Pro PowerShell for Database Developers by Apress.
- Past Microsoft Data Platform MVP.
- Past Microsoft Cloud and Data Center MVP.
- Developed a full online R Programming Language video course for PragmaticWorks.
- Masters in Business Administration from Bentley University. BA/BS from Bryant University.

https://www.youtube.com/@BryanCafferky

https://www.linkedin.com/in/bryancafferky

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Where Are We Going?

- Long Term Career Directions
- Your First Job
- Current Job Roles in Data and AI
- Recent Trends
- Your First Job & Interviewing
- Advice

Your First Job

- Focus on a job that will help you build your skills!
- Find a Company that will Invest in You! Training, Mentoring, Growth Path
- Avoid Consulting and Sales Roles.
- Consider Working On Company Premises.
- Don't Be Desperate. If you have to take a poor selection, take it but keep looking.
- Interview the Company and Remember the Manager You Work For is Critical.

JOB SECURITY

Your only job security is your skills!!!

Surfing Tech Skills

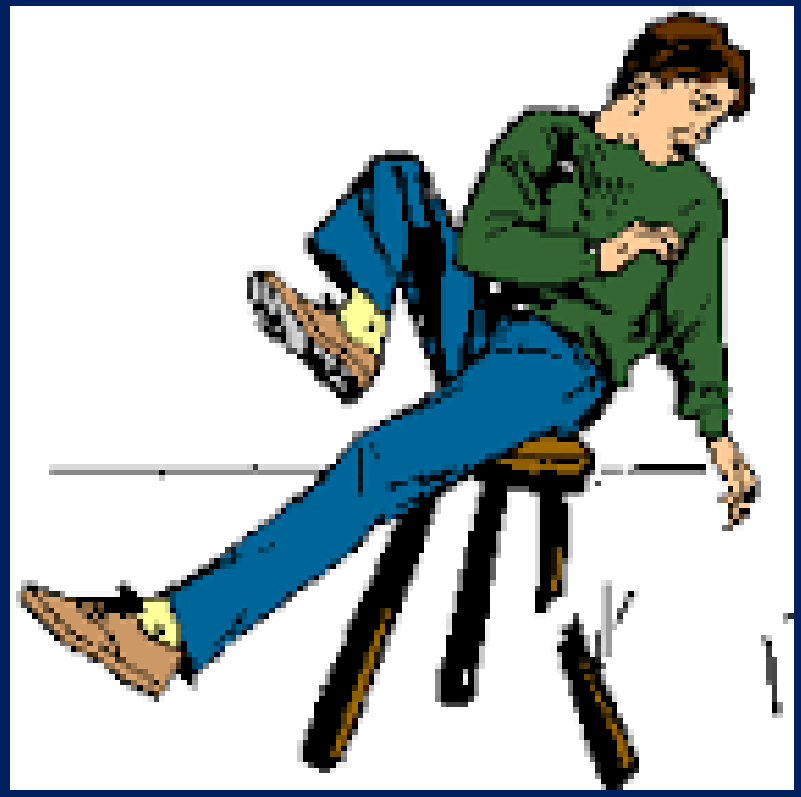
Client Server (1995 – 2005)

Mobile Computing (2006 – 2014)

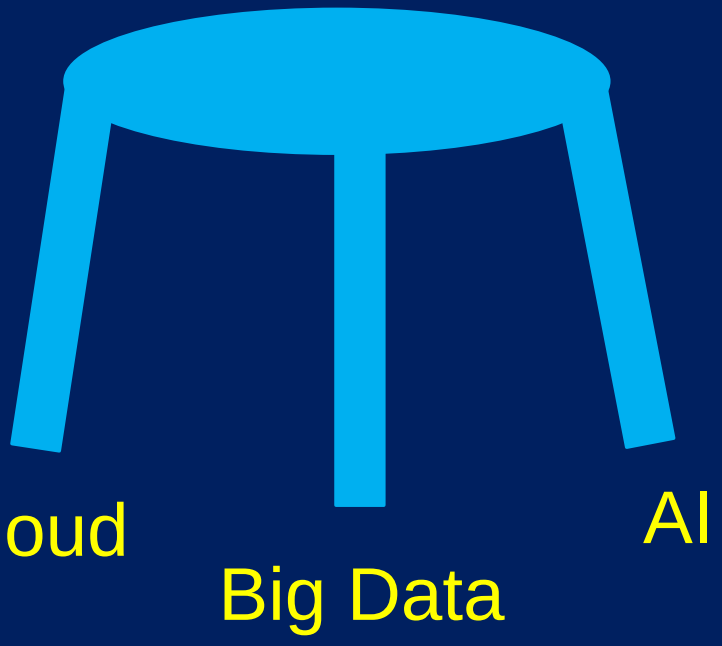
Data Analytics, AI & Public Cloud (2015 – Present)

You Need to Watch for Technical Shifts and Continually Be Learning!

SURVIVING THE CHANGING LANDSCAPE



THE CURRENT DATA PROFESSIONAL



Hands Off Automation

Platform Agnostic

Myriad Technologies

Data & AI Roles

Data Analyst

Less Technical
Business Focus
May Do DW Models

Data Engineer

Medium/Big Data
ETL/ELT

Data Scientist

Expert in Statistics
Create AI/ML Models
Being Automated?

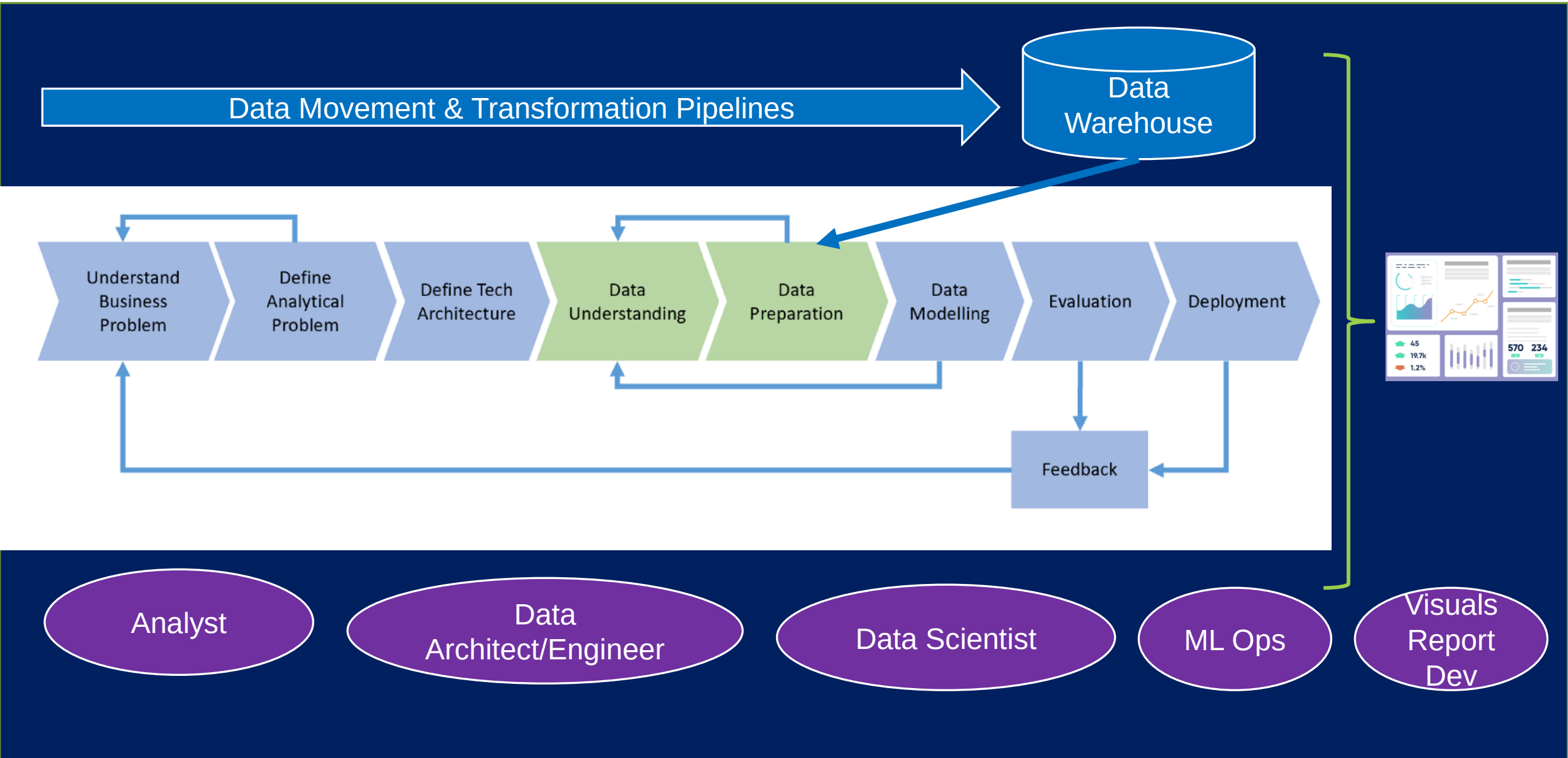
ML Ops

Tracking
Deploying Models

Report Dev

- Visuals
- ETL/ELT Data Models within BI Tool

The Data Science Process



Roles Breakdown

Data Engineer

- Big Data Solutions Design and Orchestration
- Cloud ETL with Azure Data Factory
- Data Lake/Lakehouse Design
- Python Development
- Cloud Automation
- Spark
- NoSQL Databases

Data Architect

- Cloud Based Development
- Apache Spark, Databricks, Snowflake
- Scaled Out Performance Tuning
- Big Data Solution Architecture & Design
- Securing Solutions
- Data Platform Automation

Data Scientist

- Strong background in statistics.
- Defines the business opportunity for ML.
- Works with the data engineer to define the data required.
- Feature Engineering.
- Train Models and Compare to Select the Best model.
- Work with the Data Science Operationalizer to Deploy the solution.
- Monitors the ML pipeline and refactors solutions as needed.

Cloud Data Science Operationalizer (MLOps)

- Architects and Designs the Data Science Solution.
- Designs and Implements Machine Learning Pipeline.
- Incorporates Security, Scale, Extensibility into Solutions.
- Determines best model training compute, model deployment compute, data storage technologies, and orchestration architecture.
- Well Versed in Data Science and Big Data technologies.

Dashboard Developer

- Tell Data Stories with Power BI
- Wrangle Data from Many Sources
- Cloud Deployment and Admin
- Advanced Visualization Functionality
- Python and R Language
- Incorporate Machine Learning

Technical Career Directions

Career Directions

Technical Professional

- Job Security (Skills = Security).
- Mobility & Leverage.
- Salaries can be just as high as managers.

Start Here

Management

- High Salaries and possible bonuses.
- No job security. Luck and politics. Must be a "Yes" person.
- Quickly become out of touch with technology. Hard to go back.

Technical Sales

- Can pay better than the other options. $$$
- No job security. You better keep meeting your quotas.

Independent

- You are in control.
- Money depends on your success.

Thoughts on Recent Trends

Remote Working

- Companies can hire employees from low-cost locations.
- Less investment in employees.

Employee Churn

- Employers don't invest in employees anymore. It's up to you to stay relevant.
- Employers place less value on how their decisions affect employees.

Increasing Employer Volatility

- Here today. Gone tomorrow.
- High Turnover in Middle Management.

Thoughts on Interviewing

- Interviews are like going on date. You're BOTH trying to find the perfect match.
- You Need to Interview the Employer and Identify RED Flags Potential Problems.
- Red Flags:
  - Interviewer is late, rude, negative, vague.
  - Company Seems Chaotic.
  - Do they respect your time and are they thoughtful. Example: Provide lunch if you interview over lunch time.
- What Support Will You Get in the Role, i.e., mentoring, team lead, training?
- Will the Role Help You Grow Your Professional and Technical Skills?
- Is the Organization Using State of the Art Technology?
- Does It Sounds Like a Job You Want to Do?

Advice

- Avoid Joining a Consulting Firm Until You Have Experience.
- Keep Learning! College is Just a Small Start on your Continuing Education. It's Ok to spend your own money.
- Try to Pick a Focus: Data Engineering, Visualizations, Data Science.
- Network! Network! Network!
- Focus on getting the work you want to learn and do, not the company.
- Use your current job to train for your future job!

Advice

- Stop Focusing on the Grading Rubric! Knowledge is what matters.

Wrapping Up

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