



Software Consulting Careers at QCI

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COMS 203

Overview

- About Me
- Software Consulting
- Consulting at QCI
- College and Career Advice
- Questions and Answers

About Me

- Software Consultant at QCI
- 12 years of software development experience
- Developed desktop, server, and web apps
 - Web-based GIS data warehouse application used by over 180 counties and cities in the US
 - Data warehouse ETL application for energy data used by over 100 organizations
 - Global data management system for seed data

About Me

- Education
 - Double degree BS in Computer Science and BA in Philosophy from Iowa State University
 - Minor in Economics
 - Focus on Artificial Intelligence and Machine Learning
 - AS degrees in MIS and Business Administration
- Training
 - Kimball Group Training in Data Warehousing
 - ESRI ArcGIS, ArcSDE, ArcGIS Server Training

What is a Software Consultant?

- A person that helps business solve problems using software
- Has expertise in a specific area or skillset
 - vs. a Contract Programmer
- Not an employee of the company
 - Works for a consulting firm or is independent
- Typically contracted for a specific project and/or a fixed time period

Why Do Companies Hire Consultants?

- Because software consultants:
 - are experts in a specific area
 - are too expensive to keep on staff all year round
 - move on after a project is finished
 - are easy to let go if you don't like them
 - allow companies to augment their staff without increasing their employee budgets

What Makes a Good Consultant?

- Strong problem solving skills
- A passion for technology
- A desire to learn new skills and technology
- Strong communication skills
- Self-motivation
- Ability to establish trust with a client
- Giving clients a “warm and fuzzy feeling”

Employment Types

- Working for a consulting firm
 - Salaried Employee
 - Hourly Employee
- Independent Consultant (1099)

Pros of Software Consulting

- It pays very well
- You get to meet lots of new people
- You get a greater diversity of experience
- More prestige than full-time employee work
- More software development... less software maintenance
- Access to opportunities that many full-time employees don't have

Cons of Software Consulting

- Possibility of “bench time”
- You need to keep your skills fresh
- You interview more often for new projects
- Lack of long-term professional relationships
- No paid time off (for hourly consultants)
- No benefits (for independent consultants)

QCI Overview

- Founded in 1995
- Largest IT consulting firm in Iowa
 - Approximately 200 employees
 - Over 150 clients
- Provides IT consulting services for some of the largest companies in Iowa
 - Principle
 - Pioneer
 - Wells Fargo

Mission

- To help our clients use technology to improve their business and become more successful

Locations

- Des Moines (Headquarters)
- Denver
- Cedar Rapids
- Omaha
- Minneapolis

Services

- Contract Consulting
- Business Software Solutions
- Infrastructure

Contract Consulting

- Application Development
 - .NET Development
 - Java Development
- Project Management
- Business Analysis
- Software Quality Assurance
- Business Intelligence

In-House vs. On-Site Consulting

- In-House
 - Develops software for clients at QCI
- On-Site
 - Develops software for clients at the client location

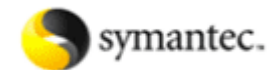
Business Software Solutions

- Custom Application Development
- Microsoft CRM
 - Customer Relationship Management
- Microsoft Great Plains ERP
 - Enterprise Resource Planning
- Mobile Development

Infrastructure

- Disaster Recovery
- Managed Services
- Network
- Storage
- VOIP (Voice Over Internet Protocol)
- Virtualization
- Managed Printing

Technology Partners



What QCI Looks for in Consultants

- QCI is looking for people that:
 - Are smart
 - Passionate about technology
 - Have strong communication skills
 - Committed to staying in Iowa
- The following attributes definitely help:
 - Professional experience
 - Sociable / likable
 - Strong GPA

College Advice

- Sit front and center in every class starting from the first day until the last day
- Double major or get a minor in a field that adds value to your primary degree
- If you get a chance, I recommend taking:
 - Intro to Psychology
 - Intro to Philosophy
 - Intro to Microeconomics

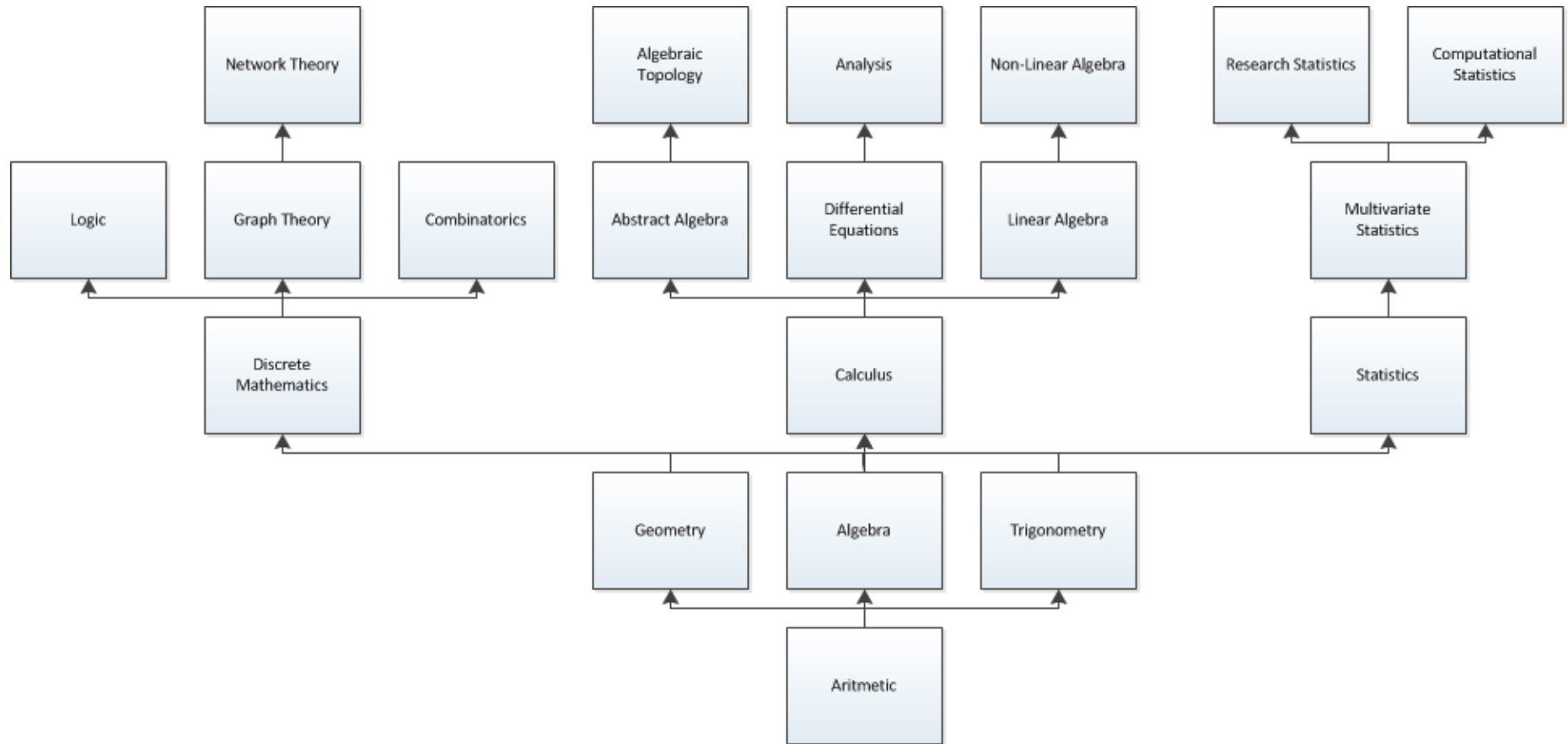
College Advice

- Avoid taking more than one project-based and one theory-based ComSci class each semester
- Learn the following languages:
 - Declarative: SQL, HTML, XML
 - Procedural: Java, C++, and/or C#
 - Functional: LISP, Scheme, Erlang, or Scala
- Write software for fun
- Meet with Gloria and listen to her advice

Math Advice

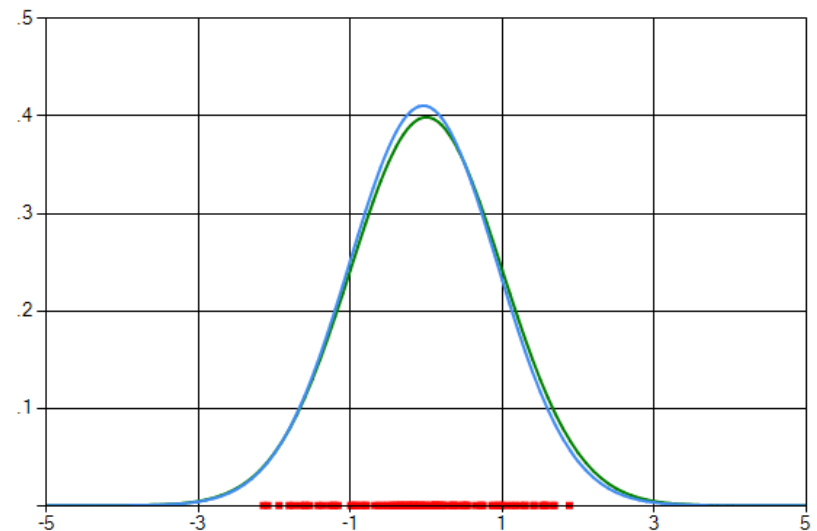
- Math becomes far more interesting in college
- Practice is the only way to get good at math
- Don't rely on your calculator too much
- Understand functions $F : x \rightarrow y$
- Learn formal logic $(p \rightarrow q) \wedge p \therefore q$
- Learn set theory $A = B \leftrightarrow \forall x [x \in A \wedge x \in B]$
- Learn statistics $\sigma = \sqrt{\sum (x_i - \mu)^2 / N}$

Math Road Map



Statistics

- Statistics is the science of collecting, organizing, analyzing, and interpreting data
- Statistics in Information Technology
 - Data Analysis
 - Data Visualization
 - Data Exploration
 - Data Mining
 - Machine Learning



Pre-Career Advice

- Start attending career fairs early and often
- Learn how to create a great résumé
- Learn to dress appropriately for interviews
- Get an internship and build your experience
- Use the ISU Career Counseling Services:
 - Résumé proof reading
 - Mock interviews
 - CMS website

Career Fair Advice

- Start attending career fairs early and often
- Dress appropriately
- Have a conversation
 - Have a list of conversation topics ready to go
 - Don't be intimidated
- Bring a smart device for notes and research
- Bring your résumé and/or a business card
- Learn the rules of the game

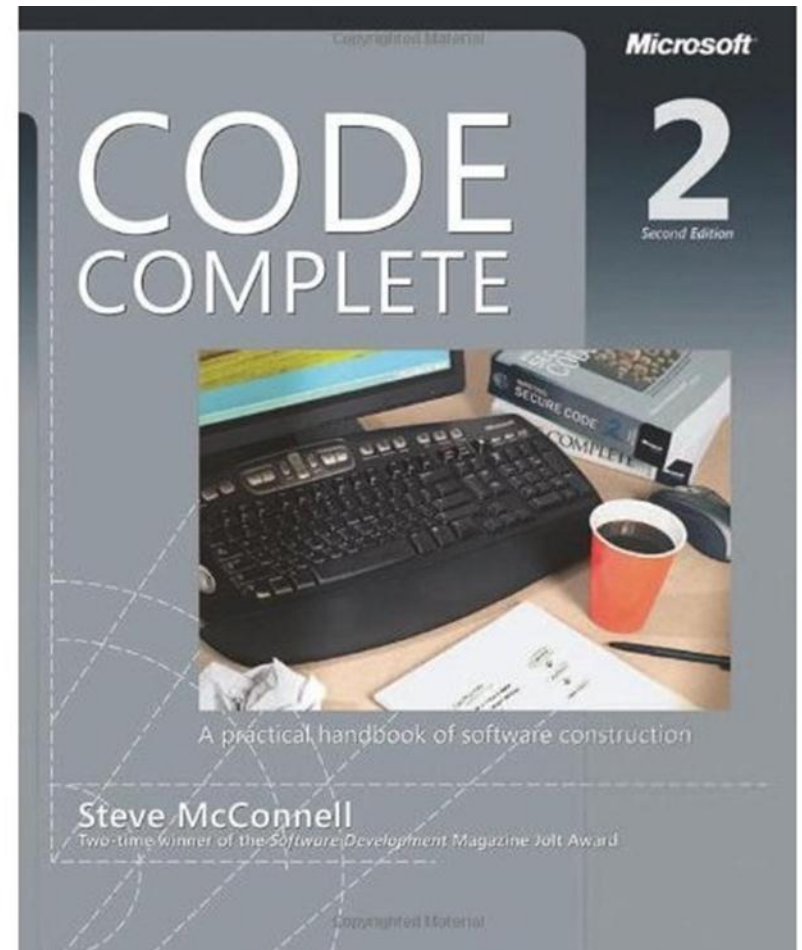
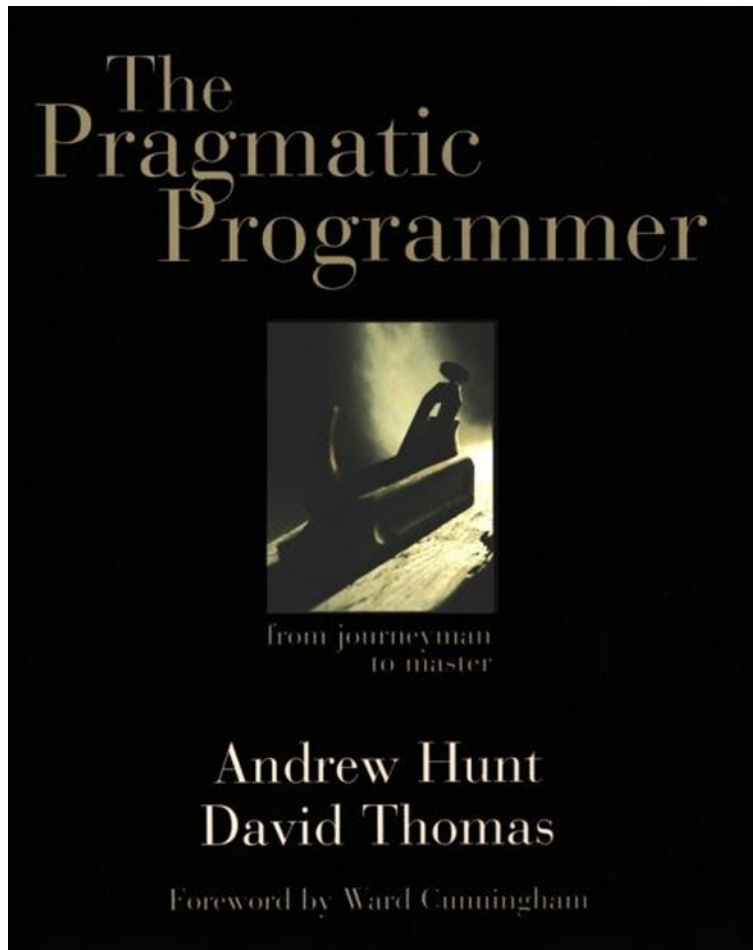
Résumé Advice

- Keep it short and simple
 - One page max for right out of college
 - Two page max for the rest of your career
- No misspellings or grammatical errors
- Be truthful
- Take a technical writing class
- Have ISU career services review your résumé
- Keep your résumé up to date

Career Advice

- Keep your skills fresh
 - Most technical skills will be obsolete in 5 years
 - Soft skills are far more important than tech skills
- Grow your professional social network
- Build your professional reputation
- Learn how to communicate your ideas
- Try to become an egoless programmer

Recommended Reading



Final Words of Advice

- Do something you love
- Do something better than anyone else
- Make sure it pays the bills

Final Words of Advice

...and learn statistics! :)

Conclusion

- Software Consulting
 - Overview of software consulting
 - Types of consulting
 - Pros and cons of consulting
- Consulting at QCI
 - Overview of QCI
 - QCI services
 - What QCI looks for in consultants
- Career and College Advice

Q & A