

CAREERS IN ANALYTICS & BUSINESS INTELLIGENCE

BUSINESS ANALYTICS

Areas:

- Data collection/Data mining
- Experiment design
- Data analysis
- Decision analysis and modeling
- Predictive analytics
- Customer loyalty and selection programs
- Marketing strategy development
- Fraud detection
- Applied statistics
- Process optimization
- Operations research/Management
- Manufacturing design
- Supply chain management
- Information technology
- Database administration
- Program/Project management
- Consulting
- Service analytics
- Artificial Intelligence
- Behavioral analytics
- Cyber security

Employers:

- Nearly all industries need business analytics:
 - Retail, online retail
 - Software and technology, Telecommunications
 - Financial services and banking, Insurance
 - Consumer products
 - Supply chain, Transportation
 - Consulting
 - Healthcare
 - Government/Public sector; Nonprofit organizations

Strategies:

- Seek broad exposure to business principles while honing statistics and quantitative skills.
- Gain relevant experience through an internship in an industry of interest.
- Develop excellent information technology, database management, and programming skills.
- Learn to use relevant software or tools such as Apache Hadoop, SQL, R, Python, and SPSS.
- Earn industry certifications (e.g., SAS and Google).
- Learn to work effectively on interdisciplinary teams and how to communicate data intensive information to colleagues.
- Develop strong analytical skills and a logical approach to problem solving.
- Get involved in campus organizations and seek leadership roles.
- Conduct informational interviews with professionals to learn about various industries or functional areas because business analytics professionals can fit into a wide array of positions.
- Consider earning a master's degree to qualify for advanced opportunities.
- Stay abreast of industry developments through professional societies and websites dedicated to business analytics, data mining, information technology, or other relevant topics.

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OPERATIONS MANAGEMENT

Areas:

- Operations research analysis:
 - Business strategy
 - Facilities layout
 - Inventory control
 - Personnel scheduling
- Production management:
 - Line supervision
 - Manufacturing management
 - Production planning
 - Quality assurance
- Materials management:
 - Purchasing/Buying
 - Traffic management
 - Inventory management

Employers:

- Manufacturers
- Industrial organizations
- Service organizations

Strategies:

- Develop strong analytical skills and a logical approach to problem solving. Skills in budgeting and cost management are also important.
- Take courses in statistics, computer systems, or logistics. This is a more technical side of management.
- Learn to manage multiple situations and problems.
- Be able to communicate effectively with different types of people in various functional areas.
- Earn an MBA to reach the highest levels of operations management.

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BANKING AND FINANCE

Areas:

- Corporate and consumer credit analysis
- Commercial lending
- Trust management
- Capital services
- Mergers and acquisitions
- Mortgage loans
- Originations and packaging
- Branch management
- Operations
- Cash management
- Credit scoring and risk management
- Private banking
- Financial analysis
- Investment banking

Strategies:

- Build a solid background in business including marketing, finance, and accounting.
- Gain experience through part-time, summer, or internship positions in a financial services firm.
- Develop strong interpersonal and communication skills in order to work well with a diverse clientele.
- Plan to earn an MBA to enter investment banking.
- Research professional certifications that may be valuable in this field.

Employers:

- Commercial banks
- Credit unions
- Savings and loan associations
- Savings banks
- Mortgage banks
- Captive finance companies
- Brokerage firms
- Regulatory agencies:
 - Federal reserve
 - Federal Deposit Insurance Corporation (FDIC)
 - Office of the Comptroller of the Currency (OCC)
 - Office of Thrift Supervision (OTS)

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INSURANCE

Areas:

- Actuary science
- Risk management/Assessment
- Loss management/Control
- Underwriting
- Asset management
- Claims
- Sales
- Customer service

Employers:

- Insurance firms
- Insurance agents and brokers
- Professional, scientific, and technical consulting firms
- Government agencies

Strategies:

- Take additional courses in mathematics and finance.
- Complete an internship with an insurance agency to gain relevant experience.
- Talk to professionals in the industry to learn more about claims, underwriting, and risk management. Many entry-level positions exist in these areas.
- Develop strong communication skills as many positions require interaction with others and the ability to explain information clearly and concisely.
- Learn how to use statistical analysis software and various computer programming languages.
- For Actuary Science: Plan to take a series of actuarial exams to gain licensure from either the Society of Actuaries or the Casualty
- Actuarial Society. The type of insurance you deal with will determine which path to pursue. Most actuaries take these exams while working full-time, and the process takes several years. More than half of actuaries work for insurance carriers.
- Initiative and sales ability are necessary to be a successful agent or broker.
- There are many certifications in the insurance industry. Research those relevant to your area.

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MANAGEMENT

Areas:

- Types of management:
 - Entry-level/Management-trainee
 - Employee supervision
 - Operations supervision
 - Project management
 - Team management
 - Information management
 - Middle management
 - Top management

Employers:

- Nearly every type of organization across industries offer management positions:
 - Banks and financial institutions
 - Retail stores
 - Restaurants
 - Hotels and other facilities
 - Service providers
 - Healthcare organizations
 - Manufacturers
 - Software and technology companies
 - Educational institutions
 - Local, state, and federal government
 - Nonprofit organizations
- Self-employed

Strategies:

- Be prepared to start in entry-level management trainee positions or corporate rotational training programs.
- Gain related experience through internships or summer and part-time jobs.
- Work at a retail store or restaurant; advance into an assistant manager position.
- Get involved in student organizations and assume leadership roles.
- Demonstrate a strong work ethic, integrity, and a sense of independence.
- Take courses in a secondary specialty such as marketing or information systems to increase job opportunities.
- Learn to communicate effectively with a wide variety of people and to work well on a team.
- Develop strong problem solving skills.