Don K. Cowan

San Francisco, CA 94111

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Summary   Experienced Data Science, Machine Learning, AI Leader

Seeking principal positions at the forefront of Data Science, Machine Learning and AI development. Has in-depth experience in:

- Data Science
- Machine Learning and Artificial Intelligence
- Mathematics
- Software Design and Development
- Team and Thought Leadership
- Consulting and Client Interactions
- Agile/Scrum
- Written and Graphic Communications, such as the authoring of The Science of Machine Learning website (www.ml-science.com)
- Verbal Communications
- Working with major cloud platforms, such as IBM, Microsoft, Google, and AWS
- International Projects, including work in country: India (Hyderabad), Europe (Netherlands, Germany, France), South America (Brazil), Asia (Japan, Taiwan), Africa (Egypt, South Africa)

Work Experience

Senior Data Scientist - IBM | May 2021 - Present | San Francisco, CA

Member of the IBM Technology Garage (www.ibm.com/garage) within the IBM major clients sales organization.

Focus on building data, machine learning model and AI components for IBM client exploratory POC and MVP applications.

Work with team members on the integration of data and ML models into application architectures, operations, user interfaces, and business impacts.

Principal Data Scientist (Machine Learning and Artificial Intelligence Focus) **- Xtrend AI** | April 2020 – April 2021 | San Francisco, CA

- Provided Machine Learning consulting services to startup **www.ester.ai** on aspects including:
  - Agile/Scrum processes.
  - Design of Machine Learning database structures and elements.
  - Development of Machine Learning image recognition models.
  - Architecture of a Machine Learning model development and deployment platform.
- Developed methods and templates to support Data Science, Machine Learning and Artificial Intelligence initiatives, including aspects such as:
  - Data Management including elements such as: data pipelines, data normalization, and databases.
  - Analysis of Machine Learning model training data and prediction processing results.

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- o   Machine Learning model design, development, and refinement.
- o   Management of projects using methods such as Agile and Scrum.
- o   Communication of key concepts to management, stakeholders, and team members.
- o   Tracking and measurement of key results.
- Authored *The Science of Machine Learning* website: **www.ml-science.com**, which includes aspects such as:
    - o   Over 200 topic web pages in topic groups including: Calculus, Computing Systems, Data, Graphs, Linear Algebra, Models and Modeling, Organization, Probability, Programming Constructs, Statistics, and Trigonometry.
    - o   Concise descriptions and graphics.
    - o   Mathematical formulas.
    - o   Python code examples.

Principal Data Scientist (Machine Learning and Artificial Intelligence Focus) **– Evergent** | May 2018 – March 2020 | San Francisco, CA

- Hired as the first Machine Learning/AI expert in the company, reporting to the CTO.
- Developed a vision and overall plan for Machine Learning development and deployment.
- Evangelized Machine Learning throughout the company.
- Consulted across multiple teams on Machine Learning initiatives.
- Initiated and led all Machine Learning projects.
- Progressed from the initial zero ML/AI systems to production systems with high levels of accuracy in areas such as: Churn Prediction, Service Signup Option Recommendation, and Service Signup Payment Recommendation.
- Worked with the company president and leadership team on aspects such as:
    - ○   Understanding Machine Learning and AI technology.
    - ○   Identifying Machine Learning applications.
    - ○   Supporting the demonstration of Machine Learning capabilities to customers and at trade shows.
    - ○   Reporting progress on key Machine Learning initiatives.
- Built, managed, and participated in a cross-functional Machine Learning team, including:
    - ○   Model development, testing, and deployment. Models included those for: pattern recognition, recommendation engines, NLP/chatbot dialog.
    - ○   Platform development for model training and prediction processing.
    - ○   Marketing and Sales support.
    - ○   User Interface specifications and development.
    - ○   DevOps processes and support.
    - ○   Workbench and production server development and deployment.
    - ○   Global deployment strategies and methodologies.
    - ○   Network monitoring.
    - ○   Methods of using probability and statistics to evaluate model performance.

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- ○ Agile Scrum methodologies, meetings, and reporting.
- Developed a Machine Learning platform, including:
  - ○ Microservices based architecture.
  - ○ Python code.
  - ○ Plug and play implementation of ML algorithms such as TensorFlow neural networks.
  - ○ API REST servers and interfaces.
  - ○ Cloud server independence (can run on any cloud provider server hardware).
  - ○ Workbench and production server compatibility.
  - ○ MongoDB database for storing information on components including: models, model training, applications, prediction results, data features.

Senior Data Scientist (Machine Learning and Artificial Intelligence Focus) **– Telmate** (since purchased by **GTL**) | December 2013 – March 2018 | San Francisco, CA

- Was the first Machine Learning/AI expert in the company.
- Developed a vision and overall plan for Machine Learning development and deployment.
- Evangelized Machine Learning throughout the company.
- Consulted across multiple teams on Machine Learning initiatives.
- Initiated and led all Machine Learning projects.
- Progressed from the initial zero ML/AI systems to production systems with high levels of accuracy in areas such as: Image Recognition to screen for prohibited content and Facial Recognition to verify user logon validity.
- Worked with the company president and leadership team on aspects such as:
  - ○ Understanding Machine Learning and AI technology.
  - ○ Identifying Machine Learning applications.
  - ○ Supporting the demonstration of Machine Learning capabilities to customers and at trade shows.
  - ○ Reporting progress on key Machine Learning initiatives.
- Built, managed, and participated in a cross-functional Machine Learning team, including:
  - ○ Model development, testing, and deployment.
  - ○ Platform development.
  - ○ Marketing and Sales support.
  - ○ User Interface specifications and development.
  - ○ DevOps processes and support.
  - ○ Workbench and production server development and deployment.
  - ○ Global deployment strategies and methodologies.
  - ○ Methods of using probability and statistics to evaluate model performance.
  - ○ Agile Scrum methodologies, meetings, and reporting.
- Developed a Machine Learning platform, including:

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- Microservices based architecture.
- Python code.
- Plug and play implementation of ML algorithms such as TensorFlow neural networks and OpenCV support vector machines.
- API REST servers and interfaces.
- Cloud server independence (can run on any cloud provider server hardware).
- Workbench and production server compatibility.
- Sequel database for storing information on components including: models, model training, applications, prediction results, data features.

Senior Software Developer – Adara Networks | June 2013 – November 2013 | San Jose, CA

Developed mobile device software defined network adaptive messaging:

- Messaging system for monitoring and managing internet traffic.

Work on this project included:

- System design.
- Performance data analysis.
- Java software development.

Senior Data Scientist – Xtrend AI | July 1998 – November 2013 | Redwood City, CA

- Authored an Android software development course including Java code: Learning Android App Programming.
- Authored an HTML5 book including Javascript code: HTML5 Canvas for Dummies.
- Developed a Machine Learning recommendation system for suggesting musicians based on their music and skillset.

Senior Software Developer and Consultant - Lucent Technologies/Bell Labs (since purchased by **Nokia**) | May 1994 – June 1998 | Brazil

- Developed and managed software and business development projects in Sao Paulo and Curitiba Brazil. Clients included large telecommunications companies. Projects included market analysis, services development and management training.

Senior Software Developer and Consultant - AT&T | Africa, South America

- Provided technology consulting services in international markets in Africa and South America.

Senior Software Developer - AT&T | Europe, Asia, South America, United States

- Developed a system for the automatic restart and recovery of a large scale database system.

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- Developed a spreadsheet system (prior to the first commercial systems such as VisiCalc).

Education

Northwestern University | BA, Mathematics

University of Illinois at Urbana-Champaign | MS, Computer Science with a focus on Machine Learning