Writing Strong Resume Bullet Points: Data Science, Artificial Intelligence (AI), and Machine Learning (ML) Industries

Turn experiences into impact using the SAR method

What do employers look for in these industries?

Effective resumes in these industries highlight measurable results such as improved forecasting accuracy, enhanced model performance, increased automation, or insights that informed business and operational decisions. Overall, this handout will help you write strong accomplishment statements for roles in data science, AI, and ML.

Tip: Remember to **customize your resume** by incorporating keywords from the job description. For additional guidance on formatting and structure, review our **Resume/CV templates**.

SAR Method: Core Framework

- ✓ Your resume must contain concise bullet points to describe your experiences
- ✓ SAR statements effectively outline your accomplishments in a simple, informative way

What is SAR?

S = Situation: What was the context? (e.g., problems you encountered or tasks you took on)

A = Action: What did you specifically do? (e.g., use a strong past-tense **action verb**)

R = Result: What changed because of your actions? (e.g., improvements or outcomes)

Note: When formatting a resume bullet point, the sequence should be Action + Situation + Result. Also, try to incorporate numbers, percentages, or dollar amounts to further demonstrate your impact.

A weak example for a summer internship could be:

- Assisted with data analysis and machine learning projects

A strong example for a summer internship using the SAR method could be:

- Analyzed ridership data from 50 bus routes, developing a transit demand forecasting model that reduced prediction error by 16% compared with prior averaging methods

How the SAR Method was implemented:

ACTION: Analyzed

SITUATION: ridership data from 50 bus routes,

RESULT: developing a transit demand forecasting model that reduced prediction error by 16% compared with prior averaging methods

Note: This statement includes industry-specific context and skills, clearly communicates the result or intent of the action, and incorporates numbers to strengthen its impact.

Tip: For current students, review the **Carleton Career Competencies** to identify the knowledge, skills, and attributes developed through your academic journey. These reflections can help articulate your employability and write stronger SAR statements.

Impact Levels: Early Experience vs Advanced Experience

This section will help you brainstorm the context of your work (Situation) and the impact of your contributions (Result), with sample examples tailored to your level of experience.

Early Experience (e.g., co-ops, placements, internships, projects, clubs, and entry-level roles)

Considerations for the Situation	Questions to Help Frame the Result
• **Carleton Career Competencies** (e.g., Digital Literacy, Innovation & Collaboration, or Research & Analysis) • **Data or AI/ML activities** (e.g., data cleaning, prompt design, model training) • **Tools and technologies used** (e.g., Python, SQL, TensorFlow, Power BI)	• **What technical outputs were produced?** (e.g., # of dashboards, predictive models, AI prototypes, visualizations) • **What insights emerged?** (e.g., trends, image classifications, NLP findings) • **What model or analytical performance improved?** (e.g., accuracy, precision, recall)

Analytics Assignment: Cleaned environmental monitoring data from 35 air quality stations using SQL and Python, creating 3 Tableau dashboards that visualized seasonal pollution trends

AI Hackathon: Collaborated with 4 students to develop a TensorFlow computer vision prototype for classifying recyclable materials, achieving 91% accuracy and earning a top-three finish among 35 teams

Advanced Experience (e.g., professional experience and leadership roles)

Considerations for the Situation	Questions to Help Frame the Result
• **Data science, AI, or ML initiatives led** (e.g., demand forecasting, fraud detection, customer segmentation) • **Business challenges addressed** (e.g., customer retention, process optimization) • **Teams or stakeholders supported** (e.g., engineering, operations, executives)	• **What solutions were deployed?** (e.g., production models, automated pipelines, data-driven recommendations) • **What business outcomes improved?** (e.g., efficiency, cost, customer satisfaction) • **What organizational impacts were achieved?** (e.g., scalability, staff productivity)

Senior Data Scientist: Directed the development of a demand forecasting platform across 300 retail locations, reducing stockout incidents by 21% and improving inventory allocation decisions

ML Engineering Manager: Led the deployment of a machine learning patient scheduling platform, reducing operational costs by 19% while improving appointment utilization

Other ways to show impact if you do not know exact numbers

- **Scope** (e.g., approximate # of records, features, models): Reviewed 500K+ records and evaluated multiple modelling approaches, informing solution selection and deployment
- **Scale** (e.g., size of datasets, systems): Maintained analytics pipelines delivering data for reporting across the GTA, enabling faster access to info for regional business operations
- **Quality Improvements** (e.g., reliability, automation): Automated monitoring and validation processes, strengthening quality assurance and reducing manual intervention

Tip: Begin tracking data to incorporate stronger metrics into future SAR statements.