

# Carter Louchheim

(801)815-9363 • [carter.louchheim@gmail.com](mailto:carter.louchheim@gmail.com) • [LinkedIn](#)

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## EDUCATION

Williams College, Williamstown, MA

*Expected June 2025*

Bachelor of Arts; Computer Science, Cognitive Science; GPA 3.9, Dean's List

- Relevant Coursework: Data Structures, Advanced Programming, Algorithms, ML, NLP, Robotics, Graphics
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## WORK EXPERIENCE

### **Wellsky, Software Engineer Intern**

*Summer Intern 2023*

- Developed Python scripts to evaluate InnerSource projects across GitHub repositories.
- Created a dynamic user interface for visualizing project performance, improving accessibility of insights.
- Automated workflows in Airflow and integrated SQL databases with Python to streamline data analysis.

### **U.S. Ski & Snowboard Team, High Performance Data Analytics Intern**

*Summer Intern 2024*

- Engineered web applications to visualize alpine skiing training data, enabling coaches to give novel and more granular feedback to their athletes.
- Designed and implemented interactive dashboards for analyzing novel GPS and biomechanical datasets.
- Delivered insights through statistical analysis, influencing key decisions on national team criteria creation.

### **Collective[i], Remote, Product Management Intern**

*Summer Intern 2022*

- Collaborated with developers to define requirements for AI-powered analytics solutions.
- Conducted technical research on data virality and synthesized findings into actionable product strategies.
- Assisted in delivering agile sprint milestones, contributing to the Intelligence.com product launch.

### **910 Media Group, Data Analytics Consultant**

*November 2024 - Present*

- Partnered with stakeholders to deliver targeted advertising insights through advanced data analysis.
  - Presented data analysis to executives, enabling advertising approaches refined to demographic data.
  - Extracted and visualized actionable insights from data using R, SQL, and API's and visualization tools.
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## PROJECTS

### **Low-Resource Neural Machine Translation (Bachelor's Thesis), Williams College**

*August 2024 - Present*

- Built a modular NLP pipeline for translating Spanish to 11 indigenous American languages.
- Leveraged PyTorch and Hugging Face for model optimization, fine-tuning and from scratch training.
- Designed reusable code for data preprocessing, training, and evaluation allowing for diverse research.

### **AI-Driven Avalanche Condition Prediction for the Wasatch Mountains**

*2024 - Present*

- Developed a recurrent neural network to predict avalanche conditions with 75% accuracy.
- Integrated advanced data engineering techniques to improve feature extraction.

### **Innersource Audit Tool, Wellsky Internship**

*Summer 2023*

- Designed and implemented a GitHub-based repository auditing tool using Python and SQL.
  - Built a responsive UI for automated visualization of utilization metrics.
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## SKILLS

- **Programming Languages:** Python, Java, React.js, SQL, JavaScript, R, C, C++
  - **Frameworks & Tools:** Git, Airflow, GCP, APIs, PyTorch, Hugging Face, Pandas
  - **Software Development:** Full-stack development, modular design, agile methodologies
  - **Soft Skills:** Communication, teamwork, problem-solving, technical writing, LLM prompting
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## ACTIVITIES

- Williams College NCAA Division I Alpine Ski Team, *Member*
- Robotics Lab Student Supervisor

*August 2022 - Present*

*January 2024 - May 2024*