Ali Salamatian

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SUMMARY

Computer Science Honours student (**4/4 GPA**) with research experience in NLP and CV (**EMNLP first-author paper**). Interested to pursue research on **multimodal models**, leveraging hands-on experience from internships at **Amazon** and **Mastercard**.

EDUCATION

University of British Columbia   Vancouver, BC
Bachelor of Science, Computer Science Honours   *September 2021-May 2026*

- **Cumulative GPA: 4/4 (92%)**
- Coursework: Machine Learning (98%), AI (97%), Computer Vision (93%), NLP (97%), Optimization(96%)

EXPERIENCE

University of British Columbia, NLP and CV Group   May 2024 – Current
Research Assistant Advised by Giuseppe Carenini, Evan Shelhamer, and Leonid Sigal   *Vancouver, BC*

- Researching on efficient video patch selection methods to achieve **quadratic savings** in attention computation
- **First-authored** *ChartGaze*, introducing the first large-scale eye-tracking dataset for chart QA and a gaze-supervised attention refinement method that aligns LVLMs' attention with human gaze, enhancing accuracy and interpretability.
- Led experiments showing our model's **improved performance in low-data settings** and stronger focus on semantically meaningful chart regions.
- Co-authored a tutorial on transformers, LLMs, and chart captioning

Amazon   May 2025 – Aug 2025
*Software Engineer Intern | **Java, Lambda, Q CLI***   *Vancouver, BC*

- Designed a scalable, secure, and cost-efficient migration plan for internal secret storage
- Increased canary test coverage by **19.5%** without impacting execution time.
- Refactored test repository leveraging Q CLI, improving maintainability, efficiency, readability, and consistency

Mastercard, Data Services Department   May 2023 – August 2023
*Software/Data Engineer Co-op | **Python, PySpark, Java Spring Boot***   *Vancouver, BC*

- Recognized with the **Innovation Week Award** for enhancing the speed and accuracy of information retrieval by developing a chatbot using Retrieval Augmented Generation (**RAG**)
- Developed an accurate K-means customer segmentation model, improving marketing strategies
- Enhanced scalability and performance of large-scale data analysis by migrating from pandas to PySpark, resulting in **33% faster** client profiling and benchmarking

Mastercard, Decision Management Platform   May 2022 – December 2022
*Software Engineer Co-op | **Java Spring Boot, SQL, Jenkins, Angular***   *Vancouver, BC*

- Re-implemented and deployed an application to Pivotal Cloud Foundry, enhancing scalability and maintainability through a **microservice-oriented design** and automated Jenkins pipelines
- Introduced **automation** by developing a feature that updated over 600 rules in production

PUBLICATIONS

- **Ali Salamatian**, Amirhossein Abaskohi, Wan-Cyuan Fan, Mir Rayat Imtiaz Hossain, Leonid Sigal, and Giuseppe Carenini. *ChartGaze: Enhancing Chart Understanding in LVLMs with Eye-Tracking Guided Attention Refinement.* **EMNLP 2025 Main Conference** (paper link).

AWARDS

- Undergraduate Student Research Awards (USRA)
- Trek Excellence Scholarship (**top 5% of faculty of science**)