Lelin Zheng

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EDUCATION

Northeastern University – Seattle, WA — Sep 2024 – Dec 2026 (Expected)
Master of Science in Computer Science (Align Program), GPA: 4.0 / 4.0
Relevant Coursework: Computer Systems, Algorithms, Object-Oriented Design, Discrete Structures

University of Alberta – Edmonton, AB — Sep 2020 – May 2022
Bachelor of Education (After- degree) with Distinction, GPA: 3.8 / 4.0

University of Alberta – Edmonton, AB — Sep 2017 – May 2019
Master of Science in Materials Engineering, GPA: 4.0 / 4.0

TECHNICAL KNOWLEDGE

- **Languages:** Python, Java, C, HTML/CSS, JavaScript
- **Tools & Frameworks:** Git, Swing, Tableau, PyQt, Flask, Django
- **Databases:** MySQL, SQLite

RELEVANT WORK EXPERIENCE

High School Computer Science Teacher — Sep 2022 – Jun 2024

Calgary Board of Education, Crescent Heights High School, Calgary, AB

- Taught Computer Science to 100+ grade 10/11 students, covering programming fundamentals, algorithms, procedural and functional programming, OOP in Python, and HTML/CSS for web development
- Achieved a 15% improvement in student grades through tailored instruction and engaging programming assignments, fostering a deeper understanding of computer science fundamentals.

Research Assistant — Oct 2019 – Sep 2020

University of Alberta, Edmonton, AB

- Analyzed data from over 200 tensile, UV degradation, and compression tests to develop an end-of-life sensor for textiles, delivering degradation warnings at 50% and 80% deterioration thresholds

PROJECTS

Gesture-Based Music Creation App in Java — Sep 2024 – Dec 2024

Northeastern University

- Developed an interactive interface for composing music through gesture recognition, utilized 20+ classes to model musical elements such as notes, bars, and staff, enhancing user engagement beyond button-based inputs.
- Implemented extensive OOP principles to create gesture-recognition tools, resulting in a 60% increase in speed for music composition compared to traditional methods, with a flexible framework for music composition.

Climate Resiliency Hackathon — Oct 2024

Northeastern University

- Analyzed five multi-layered data, including socioeconomic and environmental risk factors, to pinpoint optimal emergency shelter locations in King County for over 10,000 high-risk community members.
- Created interactive visualizations using Tableau to reveal correlations between extreme weather risks and community vulnerability, supporting data-driven decisions-making.

Digital Family Tree: An Application of Graph Data Structures — Nov 2024 – Dec 2024

Northeastern University

- Developed a Python-based application to create and explore family trees with up to 50+ members, featuring efficient relationship search using the Breadth-First Search (BFS) algorithm, graph visualization with NetworkX, and JSON-based data storage.