

# Nicole ElChaar

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## Professional Experience

**Software Engineer & Technical Lead | Lazarus AI** Jan 2024 – Present

- Leading development of full-stack applications to connect customers with foundation models (Python)

**Software Engineer II | Boeing** July 2023 – Jan 2024

- Developed apps and displays for the Space Launch System of NASA's Moon to Mars mission (C++, Python)

**Software Engineer Consultant | JCSI Corporate Staffing** Dec 2020 – June 2024

- Overhauled client reporting, reducing weekly workload by ~2 hours, a 92% reduction (Python, T-SQL, R)

**Software Engineer Intern | Meta (formerly Facebook)** May 2022 – Aug 2022

- Increased throughput for replica catch ups by 2–4 times in Meta's largest distributed database (C++)

**Summer Software Development Analyst | Citi** June 2021 – Aug 2021

**Summer Research Analyst | Evermay Wealth Management** May 2019 – Aug 2019

## Education

**Lehigh University | M.S. Computer Science** May 2023

- President's Scholar Program (full scholarship)
- Relevant Coursework: Computer Vision, Data Mining, Parallel Computing, Network Security
- Cumulative GPA: 4.00/4.00 | Highest Honors (Summa Cum Laude)

**Lehigh University | B.S. IBE Finance | B.S. Computer Science | Data Science Minor** May 2022

- Integrated Business & Engineering Honors Program | Tau Beta Pi (2020) | Upsilon Pi Epsilon (2021)
- 2022 CSE Systems Award recipient for excellence in parallel, concurrent, and distributed computing
- Cumulative GPA: 3.85/4.00 | Major GPA: 3.96/4.00 | Highest Honors (Summa Cum Laude)

## Projects

**ESG Investing Dashboard | [nicole-elchaar.github.io/esg-details](https://github.com/nicole-elchaar/esg-details)** May 2023

- Created interactive machine learning models to explore values-based investing (Pandas, Plotly, Streamlit)

**Automated Lip Reading Hourglass Network | [nicole-elchaar.github.io/alr-details](https://github.com/nicole-elchaar/alr-details)** Nov 2022

- Engineered a novel convolutional neural network for automated lip reading (PyTorch, OpenCV, PySpark)

**Job-to-Job Flows on Market Performance | [nicole-elchaar.github.io/j2j-details](https://github.com/nicole-elchaar/j2j-details)** Nov 2022

- Investigated U.S. hiring releases as a leading market indicator (PySpark)

## Leadership Experience

**Head Teaching Assistant | Applied Engineering Computer Methods** Aug 2019 – May 2023

- Supported 9 TAs and ~50 students per semester, teaching coding and wiring concepts (Python, RPi)

**Chair | Professional Greek Coalition** May 2021 – May 2022

- Led the board, held professional bootcamps, and coached ~70 members of 4 organizations one-on-one

**Director of Event Planning & Founding Member | Lehigh Cheese Club** Apr 2019 – May 2022

- Raised >\$20K for two grand tastings per semester, winning Lehigh's 2019–2020 Event of the Year award

**Resident Advisor (Gryphon) | Lehigh Office of Residence Life** Aug 2019 – May 2021

**Treasurer & Founding Member | UPE (Computer Science Honors)** Jan 2021 – May 2022

**VP & Treasurer | AOE (Professional Engineering Sorority)** May 2020 – Oct 2021

## Technical Skills

- Proficient in C++, Python (OpenCV, NumPy, Pandas, PySpark, Scikit-Learn), and SQL (PostgreSQL, T-SQL)
- Competent in C, Java, JavaScript/TypeScript, R (Tidyverse), and Node.js