Cha Krupka

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Education

Dartmouth College, BA in Computer Science   Sept 2021 – June 2025

- GPA: 3.7
- **Coursework:** Computational Linguistics, Database Systems, Evolutionary Game Theory, Machine Learning, Software Design and Implementation, Full-Stack Web Development, Discrete Mathematics

Experience

Software Engineer Intern, Pinterest – San Francisco, CA   June 2024 - Sept 2024

- Re-architected a high-traffic advertiser recommendation system by rebuilding a runtime API workflow into a daily Airflow pipeline that pre-processed hundreds of billions of data lines from internal sources
- Replaced a latency-prone endpoint with a key-value store enabling instant retrieval, eliminating time-outs and improving system reliability
- Improved advertiser propensity to spend by over 30% by redesigning the algorithm that linked pins to trending search terms
- Extended internal dashboards to monitor new workflow metrics and endpoint performance
- Tools Used: Airflow, AWS, Python, React, SQL, TypeScript

Software Engineer, DALI Lab – Hanover, NH   Mar 2024 – June 2025

- Collaborated directly with external clients on long-term projects spanning web, data, and computer vision technologies
- Built an interactive portal visualizing real-time energy consumption across Dartmouth College buildings
- Developed a computer vision interface enabling researchers to automatically count barnacles in marine imagery

Projects

Rummikub Play Solver   github.com/chakrupka/rummikub

- Developed an optimal-play solver for a tile-based board game using linear programming, with a dynamic, mobile-friendly user interface
- Tools Used: React, TypeScript, Python, Flask

Social Meal Scheduling App   github.com/chakrupka/stealameal-local

- Built an iOS app enabling students to schedule meals with friends through social features such as friend groups and location sharing
- Tools Used: React Native, JavaScript, Node.js, MongoDB

Trip Coordinator   github.com/chakrupka/tripcoordinator-frontend

- Built a collaborative trip-planning platform with flight tracking, date coordination, and shareable links for non-registered users
- Tools Used: React, JavaScript, Node.js, MongoDB, AWS

Indigenous Language Spell Corrector   May 2025 - June 2025

- Designed a spell-checker for a small indigenous language (Cook Islands Māori) by parsing spoken dialogue data and then fine-tuning a T5 text-to-text transformer to detect and correct misspellings, reducing the error rate by more than 70% versus commercially available tools
- Tools Used: Python, Jupyter

Technologies

Languages: C, Java, TypeScript, Python, SQL