

Alex (In Su) Chang

inch6134@gmail.com | (720) 688-7170 | [GitHub](#) | [LinkedIn](#)

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, HTML, CSS, SQL, Bash

Frameworks & Libraries: Flask, NumPy, Pandas, Matplotlib

Tools & Technologies: Git, Linux, Jupyter Notebook, PostgreSQL, MySQL

EDUCATION

University of Colorado Boulder - College of Engineering & Applied Science

Expected May 2026

B.S. in Applied Computer Science (Post-Baccalaureate) | GPA: 3.9/4.0

Boulder, Colorado

Relevant Coursework: Data Structures, Algorithms, Computer Systems, Software Development, Databases, Data Science, Programming Languages, Operating Systems, Machine Learning

University of Colorado Boulder, Leeds School of Business

December 2020

Bachelor of Science in Business Administration – Finance, *With Honors, With Distinction* | GPA: 3.9 / 4.0

Boulder, Colorado

Honors and Awards: Leeds Honors Program, Dean's List (all semesters), Beta Gamma Sigma

PERSONAL PROJECTS

CourtFinder – Basketball Court Review Platform ([Live Demo](#) | [GitHub](#))

Python, Flask, PostgreSQL, Tailwind CSS, JavaScript, Agile

- Built a full-stack web application enabling users to search and review basketball courts by location and case type
- Scraped government datasets using BeautifulSoup and implemented dynamic search filters and responsive UI
- Designed and integrated a relational PostgreSQL database to support user authentication and persistent court data
- Collaborated in a 5-person Agile team using Scrum; deployed production-ready app to Render with version control via Git

Autocomplete Search Engine with Trie Optimization ([Github](#))

C++, Algorithms, Data Structures

- Engineered a high-efficiency autocomplete system using a trie data structure for real-time prefix-based word suggestions
- Designed scoring logic to prioritize search results by frequency and match quality
- Implemented a suite of performance tests and memory usage benchmarks on large-scale word lists

K-Means Clustering Algorithm from Scratch

Python, NumPy, Matplotlib, Jupyter Notebook

- Developed an unsupervised learning algorithm (K-Means) from first principles using NumPy and vectorized operations
- Implemented iterative centroid optimization and convergence checking on synthetic and real datasets
- Visualized algorithm steps and cluster groupings through animated plots to demonstrate convergence behavior

RSA Encryption System

Python, Cryptography, Number Theory, Jupyter Notebook

- Built a fully functional RSA encryption and decryption engine using custom implementations of prime generation, modular exponentiation, and the Euclidean algorithm
- Encoded messages using public-key encryption and validated security through practical key generation and testing
- Illustrated each step of the algorithm in a well-documented Jupyter Notebook, with worked-out examples and edge cases

PROFESSIONAL EXPERIENCE

Technology Investment Banking Analyst

June 2021 – June 2023

Citigroup

San Francisco, California

- Analyzed technology companies for M&A transactions, equity raises, and leveraged finance deals totaling \$2B+ in transaction value
- Built complex financial models and performed quantitative analysis using Excel, VBA, and proprietary financial software
- Conducted comprehensive industry research and synthesized large datasets to support strategic decision-making
- Collaborated with cross-functional teams to deliver time-sensitive deliverables under pressure