ALEXANDER N. CHIN

https://personal.utdallas.edu/ joseph.friedman/alexchin.html
https://github.com/Alexander-N-Chin/ anc200008@utdallas.edu
Richardson, TX (832)-493-6612 US Citizen

Targeting a full-time software development internship position for summer 2024

EDUCATION

The University of Texas at Dallas, Richardson TX — *Expected graduation: Fall 2024*

- Bachelor of Science degree - Computer Science Major
- Member of the CS^2 Computing Honors Program
- Cumulative GPA: 4.0/4.0

TECHNICAL SKILLS

Programming Languages:	Python, C/C++, Java, MIPS Assembly, Shell Bash
Web Development Tools:	JavaScript, CSS, HTML, Apache Velocity
Data Science Tools:	Python, Jupyter Notebook, Pandas, NumPy, MatPlotLib, NetworkX
ML/AI Tools:	Spacy, NLTK, Regex, Scikit Learn, OpenCV, Mediapipe
Other Tools:	Ableton Live, Adobe Premiere Pro, Illustrator, Photoshop, Figma, Cameo Systems Modeler

WORK EXPERIENCE

Neuro Spin Compute Laboratory, Richardson, TX — *Summer 2022-Current*

Research Assistant

- Spearheaded the development of **logic-locking programs** via creative applications of graph partitioning algorithms.
- Collaborated with researchers to organize the encryption of more than **500,000 different netlists** and ran them through a satisfiability solver to quantify algorithmic strength.
- Strengthened encryption times **from 2 seconds to over 12 hours of encryption** against a satisfiability solver.
- Visualized solve time graphs and encryption with the data science techniques and tools listed below to analyze the effect that more than **15 features** had on solve time.
- Presented at UT Dallas Undergraduate Research Awards Poster Presentation.
- Skills: Python, Jupyter Notebook, Pandas, MatPlotLib, Regex, NetworkX, Figma

Collins Aerospace, Richardson, TX — *Summer 2023*

Student Engineering Project Program (SEPP) Software Engineering Intern

- Leveraged model-based systems engineering (MBSE) design paradigms to develop a tool that **automates the generation of formal engineering documents** from a Cameo model for Collins Aerospace's Mission Systems projects.
- **Reduced document production costs by 98%** through the elimination of manual documentation generation.
- Projected to save **2.3% of the total contract or 6.8 million dollars** in a directly supported project.
- Collaborated with other engineering teams to understand their specific documentation needs and developed tailored solutions.
- Gave oral **presentation to senior executives** in Cedar Rapids, Iowa, and presented in a site-wide poster presentation.
- Composed extensive user manuals and trained engineers to utilize and further extend our product.
- Skills: Java, Apache Velocity, Cameo Systems Modeler

PUBLICATIONS

- **A. N. Chin**, J. D. Arzate, Y. Makris, N. Hassan, A. J. Edwards, J. S. Friedman, Physically Secure Hardware Redaction and Logic Locking with Hybrid Logic Systems, Government Microcircuit Applications & Critical Technology Conference, Mar. 2023.

PROJECTS

ResuBot: Resume Grader — *Fall 2022*

- Designed a web application that leveraged **natural language processing** to classify, recommend jobs, and grade inputted resumes on a 100-point scale and offers possible improvements.
- Implemented resume classifier via an implementation of an **XGBoost ML model** with 78% accuracy.
- Expanded functionality to recommend jobs based on resume content by fitting a **count vectorizer** to a **dataset of over 24,000 postings** as well as basic web scraping for job openings and taking the **cosine similarity** of the jobs with the resume.
- Leveraged natural language processing tools to parse and grade resume content based on 5 main features including word choice, grammar, required sections, etc.
- Designed UI screens collaboratively for the web page with React.js leading to cloud deployment via AWS.
- Skills: JavaScript, CSS, HTML, React.js, Python, Pandas, Matplotlib, NumPy, Regex, Spacy, NLTK, Scikit Learn