

# CHENYU NIU

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## EDUCATION

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**University of Wisconsin-Madison**  
*B.S Computer Science, Mathematics Minor*

Madison, WI. (September 2020 - December 2022)  
*Cumulative GPA: 3.70*

**Edmonds College**  
*A.S Computer Science*

Seattle, WA. (September 2017 - June 2020)  
*Cumulative GPA: 3.82*

## TECHNICAL SKILLS

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**Programming Skills**

Java, C/C++, Python, JavaScript, HTML, Unix/Linux, GCP, L<sup>A</sup>T<sub>E</sub>X

**Software**

Android Studio, IntelliJ IDEA, Visual Studio, VS Code, Vim, NetBeans

**Languages**

Chinese (Mandarin), English

**Course Highlight**

CS537-Operating Systems, CS532-Matrix Method in Machine Learning

## EXPERIENCE

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**Math Club**

*President*

January 2019 - June 2020

*Seattle, WA.*

- Organizing events and creating the club website. Offering volunteering opportunities during Western Washington University Math Conference. Holding preparation section of AMATYC Student Math Competition as well as Integration Bee.

**One Hour Project Club**

*English Tutor*

June 2018 - June 2020

*Seattle, WA.*

- Teach online English classes to students from rural areas of China and mainly teach students speaking using English.

**Google Developer Student Club**

*Member*

Feb 2021 - Present

*Madison, WI.*

- Google Developer Student Clubs at UW-Madison is a campus organization led by the University of Wisconsin-Madison students and supported by Google Developers.

## PROJECTS

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**Piggy Bank Mobile App**

*Back-end & Front-end developer*

April 2020

- Track user's income and expense with categories, display data in RecyclerView and a pie chart
- Cloud storage individual's user data using Google Firebase firestore
- Real-time synchronize between multiple devices

**Cryptocurrency and Stock Portfolio Website**

*Back-end developer*

December 2020

- A website that displays a user's trading record to others
- Implemented with Apache HTTP server

**Parallel Run-length encoding Data Compression Algorithm**

November 2021

- Multi-threading implementation of RLE compression algorithm
- Top 20% performance in class

## RESEARCH PAPERS

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### **Analysis of Locks and Sleep/WakeUp Routine in XV6 Operating System**

Nov 2021

- Analysis of how ptable.lock and ftable.lock is used in XV6 operating system source code as well as how XV6 schedule a process to sleep and then wake up.

### **Estimation of $\pi$ Using Binomial Theorem**

May 2021

- Demonstrate how Isaac Newton was able to generalized binomial theorem and use it to largely improved the difficulty and accuracy of  $\pi$  estimation.