

# Chang Min Bark

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## Education

### Bucknell University, College of Engineering (Lewisburg, PA)

Expected Graduation May 2026

Bachelor of Science in Computer Engineering & Mathematics Minor | Engineering GPA: 3.90 / 4.0 | Dean's List all semesters

### Bucknell University, Freeman College of Management (Lewisburg, PA)

Bachelor of Management for Engineers | Cumulative GPA: 3.97 / 4.0 | Dean's List all semesters

- **Relevant Engineering Coursework:** Data Structures & Algorithms, Software Engineering & Design, Statistics, Computer Systems, Computer Networks & Security, Programming Language Design, Algorithms Design & Analysis, Linear Algebra, Discrete Structures, Calculus (2,3), Physics (1,2)

## Skills

**Languages:** Python, Go, JavaScript/TypeScript, Java, C, RISC-V Assembly, Kotlin, R, HTML/CSS, C++ (WIP), SQL (WIP)

**Frameworks:** Pandas, NumPy, React, Node.js, Express.js, Spring Boot, Scrum / Agile, MVC, Gorm, Viper, DevOps, CI/CD (familiar)

**Tools/Systems:** Git, Docker, Postman, MongoDB, JupyterLab, PostgreSQL, Redis, Android Studio, UNIX/Linux, JUnit / Unit Testing

**Other:** Financial Models, Networking Protocols, Statistical Modeling, Machine Learning Models, Communication Skills, Leadership, Entrepreneurial Mindset,

## Experience

### Backend Engineer Intern

May 2024 - August 2024

Hangry Indonesia, Remote / Jakarta (Startup)

- **Sped up** notification system **response time** by **97% (30ms - 1 ms)** by rewriting the process in **Golang** and implementing **concurrent processing** and **optimizing workflows**, enhancing overall stability of push (FCM), SMS, email notification system
- **Reduced** cloud hosting **costs** by **70%** by creating a **scalable and persistent message queue** using **Redis streams**, replacing RabbitMQ
- **Decreased** the finance's **checking time** by **75% (4 days - 1 day)** by **automating** supply orders verification using ChatGPT4o

### Open Source Developer - Frontend and Application Development

May 2024 - August 2024

Google Summer of Code / MIT App Inventor, Remote / US

- **Improved maintainability** of **codebase** and **eliminated need for monkey patches** by integrating the new IDraggable interface into Blockly's multi-select plugin, allowing Blockly developers to use plugins in the latest Blockly version
- **Designed integration tests for bugs** and **resolved conflicts** for the updated multi-select plugin with 6+ Google Blockly plugins, ensuring seamless operation and compatibility with existing plugins
- Wrote **rigorous documentation** outlining the implementation process and debug resolutions to facilitate future improvements and maintenance for the **open-source community/mentor** with constructive feedback

### Machine Learning / Deep Learning Researcher

September 2023 - May 2024

Bucknell University Advanced Analytics Lab, Lewisburg PA (NSF-backed)

- Developed a **Convolutional Neural Network (CNN)** on **Jupyter Lab** using **PyTorch** that is capable of **image processing**
- Implemented **Adam Optimization Algorithm** in Excel to replicate CNN training and analyze model progression

## Projects

*\*Other relevant personal projects available on GitHub/portfolio website*

### Banteng-AI | AI & Full-stack

September 2024 - Present

Python, NewsAPI, Flask, Cron, Sci-kit-learn, TensorFlow

- Developed a tool that leverages AI to **analyze unstructured news data at scale, classifying sentiment** for specific companies by processing 100 news articles daily. Currently testing **different machine learning algorithms** for sentiment calculation

### Destinex (Startup) | Full-stack

August 2023 - December 2023

MongoDB, Express, React, Node, Java Spring Boot, Material-UI, Scrum / Agile, JWT

- **Led a cross-functional team** of 4 as **Scrum Master** overseeing 50+ merge requests while implementing middleware, API, and models based on **MVC architecture**, resulting in a **25% reduction** in **server response time**

**Extracurriculars** - Google Developer Group Technical Lead, Badminton Club President, Fremont Scholarship Recipient, Member of Alpha Lambda Delta, Tri-Alpha (First Gen Honor Society), Korean Cultural Association, Global Student Council