

# Chang Min Bark

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github.com/changminbark

## EDUCATION

### Bucknell University

Lewisburg, PA

*B.S. in Computer Science and Engineering w/ Business Management, Math Minor*

*Expected: 2025*

**Relevant Coursework** Calculus 2,3; Data Structures & Algorithms; Software Engineering & Design; Physics 1,2; Statistics & Engineering; Linear Algebra (Expected); Discrete Structures (Expected)

## TECHNICAL SKILLS

**Languages:** Java, Python, C++, JavaScript/TypeScript, HTML/CSS

**Frameworks:** React, Node.js, Express.js, Material-UI, Spring Boot, Scrum/Agile

**Developer Tools:** Git, GitHub, Postman, MongoDB, VS Code, Visual Studio, PyCharm, IntelliJ, Jupyter Lab, Tableau  
Anaconda (WIP)

**Libraries:** pandas, NumPy, Matplotlib, XlsxWriter, scikit-learn (WIP), TensorFlow (WIP), PyTorch(WIP)

## EXPERIENCE

### Advanced Analytics Research Lab (funded by NSF)

Sept. 2023 – Present

*Bucknell University/NSF*

*Lewisburg, PA*

- Developed and fixed Machine Learning model (convolutional neural network) on Jupyter Lab using PyTorch that is capable of rudimentary image processing (9x9 pixels)
- Extracted and organized **100+** parameters of convolutional layers and linear layers of a CNN after 25 training epochs to evaluate/monitor Machine Learning training

### Fullstack Developer

January 2023 – Present

*TEDxBucknellUniversity*

*Lewisburg, PA*

- Collaborated with website team to develop a fully responsive website for TEDxBucknell events such as the 4+ talks given every year and attended by **1000+ people**, resulting in annual sales of more than **\$5,000**
- Designed the front-end components like pages and an accordion using React
- Created the middleware and authentication/authorization routes for admin login/management system
- Built the RESTful APIs and routes that let admins log into the website to update information

### General Assistant (Software) Intern

Feb. 2021 – May 2021

*Garam-Jeongbo-Tongsin*

*Uijeongbu-si, South Korea*

- Created Excel inventory of over **10,000** computer parts using Python and XlsxWriter
- Built over 20 PCs with state-of-the-art components that were sold to consumers nationwide
- Aided marketing team in developing a marketing strategy to target younger consumers that led to a **20% increase in monthly sales worth \$10,000**

## PROJECTS

### Company Sentiment AI | Node, Express, Puppeteer, Cron, AI/Classification Models, Python

July 2023 – Present

- Developed an automated web-scraper using cron and puppeteer that scrapes over 20+ headlines from a company's Google News page
- Parsed with regex and analyzed the data to determine whether the media's sentiment towards a company was positive or negative
- Utilized and tested AI/classification models like SVC, KNearestNeighbors, DecisionTree, RandomForest, NLP, and Deep Learning Neural Network to see which model was the most accurate

### Olah Website | MongoDB, Express, React, Node, Material-UI, Git, Postman

June 2023 – Present

- Constructed a fully responsive social media website that lets sports lovers create/join events and see their ranking
- Developed an authentication/authorization system using JWT
- Wrote over **5,000** lines of code that were published to GitHub

## HONORS

Dean's List, Google Development Student Club Officer, Badminton Club President, Fremont Scholar