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# XINBEI ZHU

(+1) 5409981515 | [zhuhelen56@gmail.com](mailto:zhuhelen56@gmail.com) | [LinkedInURL](#)

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## Areas of expertise include:

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| <input type="checkbox"/> Programming in Languages | <input type="checkbox"/> Event Management | <input type="checkbox"/> Project Management                |
| <input type="checkbox"/> Algorithms Application   | <input type="checkbox"/> Data Analysis    | <input type="checkbox"/> Public Speaking and Presentations |
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## WORK EXPERIENCES

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### Inspur

Jinan, China, October 2021 - December 2021

*Digital R&D Team; Role: Software Developer Intern.*

Worked as an intern to learn about natural languages processing and use Bert model for word similarity analysis.

#### Main Contributions:

- Scraped data and keywords from the web; cleaned the database, and labeled the data. Adjusted the parameters of the Bert model to improve the accuracy of the model.

### Chinasoft International Technology Service

Beijing, China, August 2021 - October 2021

*Role: Data Analyst Intern.*

Worked as an intern to understand the specific work and affairs of a data analyst preliminarily.

#### Main Contributions:

- Participated in the daily monitoring and analysis of the data of company's products using classification models and clustering models, and statistic/computing tools like RStudio and Jupyter
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## PUBLICATIONS

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Dr. Mingqiu Wang, Min Ren, Shengli Zhao, **Xinbei Zhu**, Robust Optimal Subsampling Based on Weighted Asymmetric Least Squares, *Springer, Statistical Papers (2023)*.

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## PROJECT EXPERIENCES

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### Assessment for anti-cracking capabilities of the Glaze system

September 2023 - now

Aim to apply state-of-the-art denoising models to the Glaze system to assess its anti-cracking capabilities

#### Main Work:

- Prepare the dataset for training by ensuring data quality and consistency.
- Review academic papers to identify state-of-the-art denoising models.

### Parcel Damage Classification

January 2023 - May 2023

Set out to solve the problem of identifying damaged packages in hopes that such a system will be implemented in a distribution center to automatically identify and mark damaged packages as they pass through.

#### Main Work:

- Use Google iCrawler to gather custom image dataset and use python script to remove duplicate images.
- Train a YOLO-based model to identify the damaged packages. Incorporate the YOLO pre-trained model into our labelled dataset to develop a novel classification model.
- Build the front-end for classifying damaged and undamaged packages. Develop the front-end interface for package classification utilizing the VGG19 model with a custom top layer, subsequent to a comprehensive evaluation of recall rates and performance across multiple models, including ResNet50, YOLOv5, VisualBERT, and VGG19.

**How to Maximize Customer Value Potential?**

August 2022 - December 2022

*Client/Sponsor: Grameenphone - Bangladesh*

To reduce customers’ churn rate, increase customers’ lifetime value and maximize revenue.

**Main Work:**

- Clean the data using Removing Records Method.
- Use Classification Model and K-means Clustering Model to Analyze and Train the Data. Cluster customers into different groups; figure out the likes and dislikes of groups; decide whether to increase or decrease related services based on these criteria.

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EDUCATION AND TECHNICAL PROFICIENCY

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<b>Virginia Polytechnic Institute and State University</b> <i>Master of Science, Computer Science</i>	Started in Fall 2023
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<b>Virginia Polytechnic Institute and State University</b> <i>Bachelor of Science, Computer Science</i>	2019 - 2023
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<b>Virginia Polytechnic Institute and State University</b> <i>Bachelor of Science, Computational Modeling and Data Analytics</i>	2019 - 2023
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SKILLS AND LANGUAGES

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**Technical Skills:**  
Computer Languages: C, Java, Python, R, Latex  
**Applications & Tools:**  
Microsoft Office(Word, PowerPoint, Excel)

VS Code, Eclipse, Anaconda, RStudio, Git  
**Languages:**  
*English*  
*Chinese*