### Pai Peng

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### **OVERVIEW**

As a fluent speaker of three languages—Spanish, English, and Chinese—I bring a distinctive global perspective shaped by my educational experiences across diverse cultural backgrounds. I built a solid math foundation during my primary education in China and continued my studies through middle school to my sophomore year at a university in Spain. After gaining admission to a prestigious U.S. university for Computer Science, I made the decision to relocate to the United States in pursuit of a higher-quality education.

### **EDUCATION**

# Undergraduate Artificial Intelligence | Autonomous University of Barcelona Awards:

Sept. 2021 - Dec. 2022

- Course Honor in Linear Algebra and Calculus
- Aguas de Barcelona DC Finalist

### **Intermediate - Advanced Courses:**

- Machine Learning: Notable
- Computer Vision: 9.8
- Data Engineering: 9.5Multivariate Calculus: 9
- Undergraduate Computer Science + Data Science | University of Wisconsin-Madison | current GPA: 3.9~ Awards:

Transferred Jan. 2023 -

- 2023 Spring Dean's List

Intermediate - Advanced Courses:

- CS 400 | CS 540 | STAT 340 In progress

### WORK EXPERIENCE

### Research Assistant: Benchmarking different Deep Learning Low Light Image Enhancement Algorithms | Computer Vision Center Barcelona

- Automated image dataset acquisition by controlling light conditions using Python

July 2021 - Dec. 2022

Supervisor: J. Vázquez Corral

- Automated the sensor detection using C# to detect the real saturation and brightness of the image acquired
- Tested different deep learning algorithms that transform Low Light images into visual images
- Acquired a Lab-condition based Low Light Image dataset using OpenCV
- Undergraduate Researcher: Machine Learning Strategy for Demixing Chemical Components in Complex Mixtures | University of Wisconsin-
- Preprocessed the noisy data into characteristic peaks using Clusters and Raman Spectra properties
- Converted characteristic chemical peaks into Machine Learning readable formats
- Gridsearched the optimal hyperparameters combining self-defined classes with SKlearn
- Visualized the model's learning process using TensorBoard and Matplotlib

### Supervisor: H. Wei

### **PROJECTS & ORGANIZATIONS**

### Finalist project at Aguas de Barcelona Data Challenge

Sept. 2022 - Dec. 2022

Team Leader

- Implemented an AI model namely NeuralProphet for anomaly detection and consumption prediction purposes.
- Streamlined the detection process for different zone
- Coordinated weekly goals and tasks

Demo in Spanish

Sept. 2022 – Oct. 2022

# Spam Email Detection (Course Project)

- Implemented DNN, SVM and Random Forest to determine spam emails.
- Fine-tuned model achieved a precision rate of 94%.
- Desgined a new metric namely phi which showed the potential to improve the spam detection.

# Chinese Student Association at UAB – Head of Department of Planning

2021 - 2022

- Organized the Chinese Student Welcome Day Event at UAB

News interview at La Fundació UAB

- Planned several small engagement events

## HackUPC – Leader of the Team

- Preprocessed the data

- Optimized the model using grid search

Mar. 2021

### PROFESSIONAL SKILLS

Programming Languages: Python, Java, C++, SQL

Machine Learning: Pytorch, Sklearn, TensorFlow, Steamlit, Pandas, Numpy, matplotlib

Language Skills: Bilingual in Spanish and Chinese and fluent in English