GUANLIN (ASHTON) LI

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A Personal Website | # Blog | GitHub | In LinkedIn

MEMBERSHIP

- **Director** of China Pharmaceutical Culture Society and the Traditional Chinese Medicine and Traditional Chinese Medicine Culture Inheritance Branch
- Vice President, Auburn University Chinese Students and Scholars Association (AUCSO) Sep 2019 May 2022

PATENT

• A Saliva Protein Marker for Gastric Cancer Spleen Deficiency Syndrome and Its Detection Method and Application **obtained the patent issued by the China National Intellectual Property Administration of the People's Republic of China** on Oct 12, 2021

PUBLICATIONS

- Kaijie Yang; *Guanlin Li*; Chuwei Wang; Jimao Mo; Yuanzhe Cai; Feijuan Huang; Hongqiang Ding published **Evaluation of Chinese Civil Service Examination with Large Language Model: Journal of Shenzhen University on Dec 2024**
- Zhanyan Liu; Jieren Liu; Runtao CHI; Jimao Mo; Lei Huang; Kaixin Luo; *Guanlin Li*; Yuanzhe Cai; Feijuan Huang; Zhengzhi Wu published ITRAQ and PRM-based quantitative saliva proteomics in gastric cancer: biomarker discovery on Nov 2024

EDUCATION

New York University, USA (QS:39)

Sep 2022 - Sep 2024

- Master of Computer Engineering
- GPA 3.5/4.0
- Core Courses: Data Center and Cloud Computing, High-speed Networks, Internet Architecture and Protocols, Network Security, Real-time embedded system DSGN

Auburn University, USA (QS:801)

Sep 2018 - Aug 2022

- Bachelor of Computer Science
- GPA 3.59/4.0
- Core Courses: Introduction of Mechanical Engineering, Computer Foundation I, Computer Foundation II, Software Construction, Discrete Structure, Software Modeling and Design, Machine Learning

WORK EXPERIENCE

Research Assistant, Shenzhen Second People's Hospital

June 2024 - Present

- Assist in teaching courses related to biology and medicine or medical instruments, guide and cultivate team members in this field, and assist in work
- Participate in discipline construction, school enterprise cooperation, and international academic exchanges. Require a solid foundation in relevant professional theories and scientific research background
- Responsible for monitoring and analyzing sewage pathogens, using sewage monitoring data to understand the transmission trend of pathogens and proposing control measures
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Manager of Technical Department, International Student Service Center

Sep 2019 - May 2022

- OGS website Setting Up and Maintenance: Build an OGS website using HTML and Vue, provide services to the student community, and maintain the Apache web server on Ubuntu
- Network Configuration and Deployment: Responsible for network configuration and installation, creating and implementing router and switch configurations; Deploying firewall infrastructure for the network to ensure the security of

the entire system, providing services to over 2000 visitors daily

- Safety Management: Lead internal IT members to conduct daily inspections and evaluations to protect data, respond to internal threats, assess vulnerabilities, detect threats, conduct digital investigations, analyze logs, and ensure website security
- Equipment Installation and Project Management: Conduct on-site installation of network security wireless system equipment to ensure that all devices comply with standards and regulations

Researcher and Technical Manager, Wemed Medical Technology Co., Ltd.

Jun 2021 - Aug 2021

- Model Design: Design an efficient DNA vector extraction model based on the Node2Vec algorithm
- **Result Training:** Reduce the training time to be 3.-4.5 times faster than DNA2Vec, maintaining stable training times even as datasets grow
- Paper Writing: Co-authored the paper "An Efficient Approach for Presentation of DNA Sequence," published in DASFAA, 2022
- Awards: Invited to become a co-founder due to outstanding performance, taking on the work of the technology department

RESEARCH PROJECTS

The Performance of ChatGPT in the Chinese National Civil Service Examination

Jul 2024 - Present

Position: Research Team Leader; Model Test Manager

Project Background: To explore the "intelligence" level of ChatGPT and attempt to evaluate its cognitive ability through traditional intelligence tests

Project Responsibilities: To act as project sponsor and team leader

- **Project management and Coordination:** Fully responsible for all aspects of the project, ensuring that the project achieves its objectives as agreed. Coordinate and arrange the various work tasks of project members, and be responsible for the coordination and cooperation among them
- **Quality Control:** Responsible for overall project quality control, real-time monitoring of employee progress, and ensuring data meets requirements. And check and evaluate the data
- **Progress Management:** Responsible for preparing detailed monthly and weekly progress plans for the project based on the originally specified schedule goals, and supervising and inspecting relevant team members to strictly follow standardized procedures during the process
- Management of Testing Phase: Monitor testing progress, promptly solve problems encountered during testing, ensure testing quality and efficiency
- Data Management and Analysis: Responsible for data pre-processing and analysis processing of machine learning models, utilizing existing data or self built datasets to complete training tasks, and providing customized solutions according to business needs. Continuously exploring and applying new technologies and fields to improve data processing capabilities
- **Problem Analysis and Resolution:** Identify core issues through communication and quantitative methods, collect problems, and conduct brainstorming. Compare benchmarks, find the best practices in the industry, and continuously improve testing processes and methods

Identification of salivary protein biomarkers for gastric cancer with Spleen Deficiency Syndrome

Jun 2022 - Present

Position: Research Assistant

Project Background: To identify of salivary protein biomarkers for gastric cancer with Spleen Deficiency Syndrome **Publication:** Zhanyan Liu; Jieren Liu; Runtao CHI; Jimao Mo; Lei Huang; Kaixin Luo; Guanlin Li; Yuanzhe Cai; Feijuan Huang; Zhengzhi Wu published **ITRAQ** and **PRM-based** quantitative saliva proteomics in gastric cancer: **biomarker discovery on Nov 2024**

Patent: A Saliva Protein Marker for Gastric Cancer Spleen Deficiency Syndrome and Its Detection Method and Application **obtained the patent issued by the China National Intellectual Property Administration of the People's Republic of China** on Oct 12, 2021

Development of a High-precision Automated Sewage Detection Machine for Environmental Pathogens

Jun 2022 - Present

Position: Research Assistant

Project Background: To develop a system that integrates sewage collection, sewage detection, and pathogen data construction Library, build a virus inference platform, integrate data and model analysis with result display, and ultimately produce a high-precision automated sewage detection machine that can achieve miniaturization, intelligence, efficient, fast, and accurate pathogen environment detection

Project Responsibilities:

- Quick Grasp of Molecular Biology and Clinical Research Methodologies: Particularly helpful in the experimental design, data collection, and analysis phases; Attention to detail and innovative thinking help the team develop a novel detection method with substantial clinical potential
- Machine's High-Precision Functionality Optimization: To ensuring accurate pathogen detection in complex environmental samples
- Strong Communication Skills with high flexibility as a Team Player: Enthusiasm for learning and commitment to achieving research goals; willing to assist others and often takes the initiative to propose innovative ideas

Project Achievements: Environmental detection all-in-one machine won Guangdong Medical Award

High-speed Network Laboratory of New York University, USA

Sep 2023 - Dec 2023

Position: Research Assistant

Project Background: To quickly and efficiently monitor and analyze network traffic in a timely manner

Project Responsibilities: To improve algorithm speed and accurately monitor traffic

- Virtual Machine Configuration and Optimization: Responsible for setting up and configuring virtual machines in multiple regions, continuously optimizing the performance of virtual machine environments, monitoring the operational status of virtual machines, promptly identifying and resolving potential issues, and ensuring system stability
- Code Improvement and Testing: Conduct in-depth analysis of existing code, identify bottlenecks, and propose corresponding optimization solutions. Conduct comprehensive testing on the improved code and continuously monitor its performance
- SD-WAN Traffic Engineering: Responsible for the development of QoS measurement using EBPF language, collaborating to complete the development and testing of the QoS measurement module implemented in EBPF
- QoS Measurement and Performance Optimization: Refactor and optimize the QoS measurement module using EBPF language, reducing the latency of QoS measurement by 40%, ensuring stable and superior performance of the optimized QoS measurement function

Cloud-based Online Bookstore

May 2023 - June 2023

Position: Project Leader

Project Background: To build a public reading system for easier borrowing of e-books

Project Responsibilities: Responsible for the organization's process and subsequent operation and maintenance

- **Technical Selection and Implementation:** Build an online bookstore on AWS, implementing RESTful API with Node.js, containerizing the web application with Docker and deploying the web application on ECS
- Data Storage Management: Set up an RDS MySOL database to store data and used S3 to store media files
- Payment and Authentication Integration: Integrate with the Stripe API for payment processing and use Cognito Identity for authenticating users with third-party accounts
- Monitoring and log management: A system operation dashboard created to monitor the system's operating status and enable logging functionality based on CloudWatch

Personal Content Server Setup

Jan 2023 - Present

Position: Project Leader

Project Background: To better combine the courses I have learned, I set up my own server for practical operation

Project Responsibilities: Responsible for the progress of the project and subsequent operation and maintenance

• Requirement Analysis and Technology Selection: Responsible for formulating the plan, conducting project requirement analysis, reviewing and deciding on the technical solution of the technical solution

- Building Personal Website: Designing and developing a personal website realizing the display, update, and management of personal information, ensuring the stable operation of the website
- Building an Online Platform and Integrating with Payment System: Design and develop a platform, realizing functions, monitoring the transaction data, and making necessary adjustment
- **Network Planning and SDN Implementation:** Formulate network planning schemes according to needs, configuring and managing networks using SDN (Software Defined Network) technology

Integrated system for self-service collection, management, and analysis of body fluids

Mar 2021 - Sep 2021

Position: Research Assistance

Project Background: To provide users with an end-to-end self-service storage sample management system integrating insulation devices, sample collection software, and sample library management software

Project Responsibilities: Database development and testing

- Recruitment for clinical research: Search for knowledgeable and experienced clinical personnel in the market and industry, and popularize the original intention and purpose of this project
- Multi-group data integration platform Implement: To build one platform to solve all existing data; to build three layer sample data management and analysis service based on Saas, Paas and Iass; to build a stable big data storage and query platform

Research on DNA2Vec Algorithm, China

Jun 2021 - Aug 2021

Position: Research Assistance

Project Background: To provide consistent vector representation for use in the fields of bioinformatics and computational biology

Project Responsibilities: To apply dna2vec for various machine learning and natural language processing

- **General Trends Evaluation in the related area:** Examining competitors's latest research developments, creating graphical data representations, and summarizing practical strategies for the team
- **Practical Research Analysis:** Transformed the information into well-structured charts and graphs, allowing for clearer visualization of various trends; Included own summaries and thoughtful opinions on the data, adding substantial value to the report

Project Achievements:

- The algorithm based on Node2Vec can train 3.6 4.5 times faster than the previous DNA2VEC algorithm. And as the data set grows, the time of our proposed algorithm will not increase
- Paper to be published "An Efficient Approach for Vector Presentation of DNA Sequence, DASFAA, 2022"

SKILLS

Language:

- English: GRE 329/340: Excellent English listening, speaking, reading, and writing skills. Also available in the work
- Chinese: Native Language

Computer Language: C, C++, Python, Java, JavaScript, HTML, CSS, SQL

Framework and Tools: RESTful API, Node.js, P5.js, Kafka, Elasticsearch, Spring, Spring Cloud, AWS, Docker, MySQL, Windows, Linux, UNIX, VMware, Microsoft, FTP, SFTP, SMB, laaS

SELF - EVALUATION

Professional Ability: Solid professional knowledge, with many A's in computer science courses, particularly excelling in computer networks and security

Communication and Coordination: Organize local Chinese people to carry out healthy and beneficial activities, enhance everyone's relationships, and have strong organizational and coordination skills

Holistic Integrity: Outgoing, Positive, stable, responsible, strong under pressure, innovative, practical, and forward-looking **Hobbies:** Piano (Grade 8), Enjoys music, built a recording studio, engaged in self-composition and cover songs; Likes photography video editing, and organizes everyone to shoot related short videos; Interested in emerging technologies