DEREK QIU

Full-Stack Web Developer/Software Developer

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PROFILE:

I am a dedicated software developer and data analyst with a rich portfolio of projects spanning social media web development, game design, data visualization tools, and more. Currently pursuing my Master's in Information Technology from Griffith University, I've consistently achieved academic excellence, reflected in my notable GPA of 6.9. I pride myself on being adaptable and well-versed in multiple programming languages, including Python, JavaScript, Java, C, and PHP, among others.

EDUCATION:

Master of Information Technology (Software Development)

Griffith University (Expected completion November 2024)

Key Subjects:

- Database Design   (High Distinction)
- PHP Programming and Web Design   (High Distinction)
- Software Design   (High Distinction)
- Data Mining   (High Distinction)
- Mobile Device Software Development   (High Distinction)

Award:

1st Place of Westpac Innovation and Coding Competition - 2024

3rd Place, International Collegiate Programming Contest Level B - 2024

Best Presentation, HealthBiz Data Hack - 2024

Griffith Award for Academic Excellence - 2023

RELEVANT PROJECTS:

Bank of the Future Project - Westpac Hackathon   July 2024 - July 2024

- Led a team to participate in the Westpac Hackathon competition and won first place out of over fifty teams.
- Integrated an advanced AI chatbot using a pre-trained language model, fine-tuning it with data from Westpac's FAQ to provide personalized financial advice.
- Built a Python server with Flask to handle communication between the front end and back end, ensuring smooth operation and interaction.
- Project demonstrated innovation, technical excellence, and the potential for widespread impact and future enhancements in the banking sector.

Mobile Application Development   March - 2024 - Continue

- Developed several mobile applications with React Native, including 'Tic Tac Toe' and a 'To-do List' applet
- Utilized JavaScript and React Native for cross-platform compatibility, ensuring smooth operation on Android, iOS, and web platforms.
- Successfully met all requirements, achieving a High Distinction with score of 95%.

Social Media Web Development   Aug 2023 - Oct 2023

- Developed web pages for a social media application utilizing PHP, HTML, CSS, and the Laravel framework.
- Designed an "Entity-Relationship Diagram" (ERD) to establish the database structure, implementing it with SQLite.
- Successfully met all requirements, achieving a High Distinction with a score of 98%.

Tetris Game   Jul 2023 - Sep 2023

- Develop an advanced version of the classic Tetris game, enhanced with an AI mode capable of autonomous gameplay.
- Employed the Python library pygame
- Incorporated Pierre Dellacherie's Algorithm to develop an AI model
- Successfully met all requirements with comprehensive functionality, achieving a High Distinction.

PROFESSIONAL MEMBERSHIPS:

- 2023 - current   Mmeber - Griffith Coding Club
  - Participated in the ICPC competition in September 2023.

WORKING EXPERIENCE

Back-end Developer Intern

Cinefly – Internship | July 2024 – Present

- Worked on cutting-edge AI and cloud-based solutions to enhance video content search and platform reliability.
- Developed an AI search feature using AWS OpenSearch to retrieve video content based on customer queries through vector search.
- Implemented a failover system that switches between primary and secondary AI models to ensure uninterrupted service.
- Evaluated and recommended backup AI models for text generation, image generation, and audio/video denoising.
- Conducted performance testing of AWS Lambda functions in Node.js + TypeScript and Python, comparing their cost-efficiency and optimizing memory allocation.
- Key technologies: AWS OpenSearch, MongoDB, Lambda (Node.js & Python), AI model integration, vector search.

Sessional Academic Tutor

Griffith University – Casual | July 2024 – Present

- Facilitated workshops for undergraduate and graduate students in Software Technologies (2810ICT/7810ICT) and Mathematics for Computer Science (1013ICT).
- Taught key topics including low-level programming, software configuration, version control, and C programming.
- Instructed on basic C programming and advanced Python techniques.
- Guided students in practical projects such as developing a data visualization app and implementing advanced mathematical concepts using C programming.
- Assisted with course planning and student assessments to enhance academic outcomes.
- Key skills: Higher Education Teaching, C Programming, Python, Data Visualization, Software System Development.

TECHNICAL SKILLS:

- **Python / JavaScript / C / PHP / Java / R**
- **CSS / HTML5 / SQL / Git / GitHub**
- **React / Laravel / Bootstrap / Django**
- **Microsoft Office Suite of programs**

- **AWS - Lambda / S3 / Opensearch / API Gateway...**
- **Pycharm / IDEA / VScode / Matlab / Rstudio**
- **3D Unity / Inventor / Fushion 360**
- **English / Chinese / Japanese**

PROFESSIONAL SKILLS

- **Problem-Solving Skills:** Demonstrated by identifying and addressing complex issues during the development of the inclusive banking application, finding innovative solutions under time constraints.
- **Quick Learner:** Demonstrated by self-teaching additional programming skills and frameworks during my free time, showcasing my ability to rapidly acquire new knowledge and apply it effectively.
- **Strong Oral and Written Communication Skills:** Developed through numerous assignments that required frequent collaboration and communication within groups, as well as report writing, highlighting my proficiency in conveying ideas clearly and effectively.
- **Effective Teamwork Skills:** Cultivated by collaborating with other students on at least five group assignments, each of which achieved a High Distinction, underscoring my ability to work well within a team and contribute significantly to our collective success.
- **Time Management Skills:** Proven by consistently completing all assignments ahead of schedule while pursuing my graduate studies, showcasing my capability to efficiently manage my time and prioritize tasks.

REFEREES:

Larry Wen
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