ZECHENG ZHANG

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EDUCATION

Master of Computer Science, New York University, GPA: 4.0/4.0   **Expected May 2023**
Relevant Coursework: Algorithms and Data Structure, Database Systems, Computer Networking, Machine Learning, Algorithmic Machine Learning at Large Scale, Cloud Computing, Big Data, Computer Vision, Object Oriented Programming

Bachelor of Mathematics, The Chinese University of Hong Kong GPA: 3.84/4.0   **Sep 2017 - May 2021**

TECHNICAL SKILLS

Programming languages	Python, Java, C++, JavaScript
Database	MySQL, PostgreSQL, SQLite, MongoDB, RDS, DynamoDB
Frameworks and Libraries:	React, Django, Express, PyTorch, TensorFlow, Scikit-learn
Development tools:	Git, Linux, Elasticsearch, Docker, Kubernetes, AWS (EC2, S3, API Gateway, Lambda)

EXPERIENCE

Software Engineering Intern   **May 2021- Aug 2021**
HireBeat   *New York, NY*

- Initiated a project to improve the natural language processing (NLP) component of the company's AI-based resume scanning system, resulting in a 15% increase in the system's accuracy for identifying key skills and qualifications.
- Leveraged Python and NLP libraries such as NLTK and spaCy to pre-process and extract information from over 4,000 resumes.
- Customized machine learning models such as Random Forest and Naive Bayes to categorize resumes based on job requirements, resulting in a 8% improvement in the system's match rate.
- Applied AWS SageMaker to train and deploy the models, resulting in a 12% decrease in training time and a 88% reduction in training cost.
- Collaborated with the team to integrate the improved NLP component into the overall resume scanning system, resulting in a 25% increase in user engagement and a 10% increase in client acquisition.

PROJECTS

NYU Rental Marketplace (React, Python, AWS, Full Stack, DevOps)   **Oct 2022-Dec 2022**

- Integrated Apartments.com API to retrieve over 4,000 rental listings, stored the data in Amazon DynamoDB and used AWS OpenSearch to enable efficient data querying.
- Coded a sublease function using relational database RDS and SQL queries, resulting in approximately 80 listed subleases on the platform, and exploited AWS S3 to store sublease information.
- Configured an AI agent using AWS Lex to recommend rentals to users, resulting in increased user engagement and a 21.1% increase in user activity.
- Automated CI/CD pipeline using AWS CloudFormation and AWS CodePipeline, streamlining the deployment process and enabling faster delivery of updates and new features, resulting in a 50% decrease in deployment time.
- Managed a team of 4 developers and coordinated project delivery to ensure timely completion, resulting in over 110 active users and 30% monthly user growth.

Mini Stackoverflow (Python, Django, Backend, AWS)   **Jan 2022-Feb 2022**

- Developed a question-answer platform with over 20 features such as notification, keyword search, recent activities, user tiers and topic hierarchies.
- Created the front-end user interface using React and the Material-UI library, incorporating real-time updates through the use of Ajax and JSON data, cutting the page load time by 50%.
- Designed RESTful APIs in Django Rest Framework to handle user authentication and CRUD functionality, resulting in a 40% decrease in backend development time.
- Applied Django ORM to design and implement a relational database, utilizing MySQL to store user and course information.
- Implemented user authentication and session management using JSON Web Tokens (JWT) and cookies.
- Deployed the application on AWS using S3 for front-end resources, RDS for remote database, and ECS with a load balancer for backend services, resulting in a highly available system supporting 1000 simultaneous users.

Online Chat Desktop App (Java, MySQL, JDBC)   **Nov 2021-Dec 2021**

- Developed a comprehensive online chatting software with user registration, login, online status tracking, and message notification features.
- Established secure and efficient user management using MySQL and JDBC prepared statements, preventing hacking attacks such as SQL injection.
- Architected a multi-threaded server through socket programming techniques that enables real-time communication between over 100 users.
- Structured the codebase using concepts from object-oriented programming, which reduced development time by 20% and improved code-base maintenance.