Duong Van Chien

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PROFILE SUMMARY

Results-driven **Senior Software and Data Engineer** with over 10 years experiences in architecting, developing, and deploying robust, scalable full-stack applications. Possesses deep expertise across the entire software development lifecycle, from concept and design to implementation, optimization, and maintenance. Proven ability to lead technical projects, drive architectural decisions, and deliver high-quality, maintainable code. A versatile engineer proficient in both Java and Python ecosystems, with strong front-end capabilities, dedicated to bridging business needs with effective technical solutions.

Core Competencies & Technologies:

- **Backend Development:** Python, Django, Celery | Java, Spring Framework(MVC), Hibernate, Java EE(DDD), JPA
- **Frontend Development:** JavaScript, React.js, jQuery, HTML, CSS
- **Database :** Oracle, Mysql, SQL Server, Data Warehouse
- **Data Processing & Analysis:** PySpark, Pandas, SQL, PLSQL
- **Infrastructure & DevOps:** Docker, AWS, Redis
- **Methodologies & Skills:** Full-SSDLC, System Architecture, Design Data Warehouse, Performance Tuning, API Design, Agile/Scrum, MVC Architecture, Domain-Driven Design
- **Testing:** Junit, JMockit
- **System Modeling :** UML Diagram

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EDUCATION

Bachelor's Degree in Computer Science   Sep 2010 – May 2014
Ha Noi University of Industry

EXPERIENCES

1. United Insurance Company of Viet Nam – *Technical*   Aug 2022 – Present

Project : End-to-End Development of UIC Report System   Aug 2023 - Present

- **Requirement & Planning:**
  Collaborated with cross-functional teams (Finance, Sales, UW, Claim Actuarial…) to gather and clarify business requirements, and design a scalable architecture for reporting and analytics. In addition, worked independently with individual departments to build tailored reports and provide reliable data solutions, ensuring that each team's operational and analytical needs were met..

- **Data Warehouse & Modeling:**
  Designed and implemented a dedicated on-premise Data Warehouse decoupled from the core insurance system, ensuring reporting workloads do not impact transactional DB and application performance. Applied star schema design, partitioning, and indexing strategies to optimize query performance and scalability, accelerating complex reports multiple times and enabling advanced actuarial, finance, and sales analytics**.**

- **Data Pipeline & Orchestration:**
  Developed batch ETL pipelines using Python (Pandas), Spark and Airflow to ingest data from Oracle, ensuring data consistency and incremental loading.

- **Reporting Optimization:**
  Optimized complex SQL queries and dashboard queries (e.g., aggregations, joins) by rewriting inefficient statements and applying database tuning techniques such as indexing, partitioning, and temporary tables... These improvements significantly accelerated report generation and enhanced overall system responsiveness, enabling Finance, Sales, UW, Actuarial… teams to access insights faster and improve performance of business operation

- **Analytics & Dashboarding:**
  Developed and Implemented reporting and dashboarding solution with Metabase, strategically chosen over custom development to reduce delivery time and maintenance overhead. Enabled self-service analytics for business teams with dynamic filtering, drill-downs, and export features, supporting > 80 active users while maintaining a 1-person data team.

- **Deployment & Maintenance:**
  Containerized the application using Docker and managed CI/CD pipelines via GitLab.

Project : Building Digital Signature System   Nov 2022 – Jul 2023

- **Requirement & Planning:**
  Owned the end-to-end project lifecycle. Independently gathered and analyzed business requirements from stakeholders to define system specifications, technical feasibility, and the implementation roadmap for a secure and compliant digital signature solution.

- **System Architecture & Design:**
  Architected and designed the entire full-stack application. Designed the database schema and defined RESTful APIs to handle document workflow, user management, and secure signature processes**.**

- **Backend & Core Logic Development:**
  Engineered the core backend services using Java Spring Boot to manage user authentication, document processing, and the cryptographic signature logic. Ensured high security and compliance with digital signature standards**.**

- **Frontend Development:**
  Built an intuitive and responsive user interface using React.js and JavaScript for users to upload documents, apply signatures, manage signed document, workflow…

- **Deployment & DevOps:**
  Implemented Containerized the application using Docker to ensure consistency across development, testing, and production environments. Built and maintained a full CI/CD pipeline with GitLab to automate the entire process from code integration and testing to deployment, significantly improving development efficiency and release speed.

Project : Development Data Pipeline and Design Report for Agent Portal

- **Requirement & Planning:**
  Collaborated with cross-functional teams to gather business requirements, and support design a scalable architecture for reporting and analytics.

- **Data Warehouse & Modeling:**
   Implemented data partitioning and indexing strategies to improve query performance.

- **Data Pipeline & Orchestration:**
  Developed batch Celery pipelines using Python (Pandas), to ingest data from Oracle, ensuring data consistency and incremental loading.

- **Reporting Optimization:**
  Optimized complex SQL queries and dashboard queries to reduce report generation time.

- **Web Portal & Dashboarding:**
  Designed and built a self-service Django-based web portal with interactive dashboards using Plotly, JavaScript, and HTML/CSS, enabling business users to dynamically filter, and export reports.

Project : Development Agent Portal

- **Requirement & Planning:**
  Collaborated with the development team and stakeholders to analyze business requirements and translate them into technical specifications for the agent portal implementation and analytics.

- **System Architecture & Design:**
  Architected and designed the full-stack application using Django Framework for the backend and React.js for the frontend. Designed the MySQL database schema and defined RESTful APIs to handle business logic and data management.

- **Backend Development**
  Developed robust backend services using Django and Django Framework, implementing business logic, user authentication, and API endpoints. Utilized Celery with Redis as the broker to handle asynchronous tasks and background job processing.

- **Data Pipeline & Orchestration:**
  Developed batch Celery pipelines using Python (Pandas), to ingest data from Oracle, ensuring data consistency and incremental loading.

- **Frontend Development**
  Built a dynamic and responsive user interface using React.js with HTML5 and CSS3. Implemented server-side rendering for certain components using Jinja templating where required for optimal performance.

- **Deployment and DevOps:**
  Deployed the application using Gunicorn as the WSGI server with Nginx as a reverse proxy.

Project: Developing Central Data Web Service   Mar 2017 – Oct 2017

- **Overview architecture:**
  Designed and implemented a centralized RESTful Web Service using Java, serving as a data gateway
      for Agent Portal, Customer Portal, and CCS (auto mail & SMS system).

  Developed backend modules to retrieve, transform, and expose data from core systems through secure
      and standardized APIs.

  Collaborated with other teams to define API specifications and ensure seamless integration across
      multiple platforms.

  Deployed and monitored the service in production to maintain stability and traceability for all consuming
      systems.

Project : Maintaining and Developing Core Life Insurance System   Jul 2016 – May 2022

- **Requirement & Planning:**
  Owned the end-to-end project lifecycle. Independently gathered and analyzed business requirements
  from stakeholders to define system specifications, technical feasibility, and the implementation
  roadmap for a secure and compliant digital signature solution.

- **System Architecture & Design:**
  Architected and designed the entire full-stack application. Designed the database schema and defined
  RESTful APIs to handle document workflow, user management, and secure signature processes**.**

- **Backend & Core Logic Development:**
  Engineered the core backend services using Java Spring Boot to manage user authentication,
  document processing, and the cryptographic signature logic. Ensured high security and compliance
  with digital signature standards**.**

- **Frontend Development:**
  Built an intuitive and responsive user interface using React.js and JavaScript for users to upload
  documents, apply signatures, manage signed document, workflow…

- **Deployment & DevOps:**
  Implemented Containerized the application using Docker to ensure consistency across development,
  testing, and production environments. Built and maintained a full CI/CD pipeline with GitLab to
  automate the entire process from code integration and testing to deployment, significantly improving
  development efficiency and release speed.

3. Nittsu System Co.ltd – *Software Developer*   2014 – 2016

Project : Developing Health Care System   Jan 2015 – Jul 2016

- **Backend & Core Logic Development:**
  Collaborated with business analysts and domain experts to gather and analyze healthcare business
  requirements. Translated requirements into detailed UML diagrams (Activity, Sequence, Class) and
  defined the technical design following Domain-Driven Design (DDD) principles.

- **System Design & Modeling:**
  Designed the system architecture and domain model using UML to clarify data flow, business logic, and
  system interactions

- **Backend Development:**
  Developed backend components using Java EE and JPA based on UML design and business rules.
  Implemented domain services, repositories, and business logic layers following DDD patterns. Applied

Unit Test and JMockit to verify business logic correctness and improve code reliability.

- **Frontend Development:**
  Built and integrated the frontend using HTML, CSS, JavaScript (KnockoutJS) for dynamic and responsive user interfaces. Implemented UI logic to interact seamlessly with backend services and validated end-to-end functionality.

- **Testing & Validation:**
  Tested backend components using JUnit and JMockit to verify business logic and service interactions. Performed data-driven testing to validate end-to-end integration between frontend and backend, ensuring workflow accuracy and data consistency across modules..

TECHNICAL SKILLS

- **Programming/Scripting**: Python (Pandas, PySpark, Airflow), Java, SQL (Advanced Query Optimization), Java script, Jquery, React, HTML,CSS
- **Big Data and Data Engineering**: Apache Spark (Spark SQL), Apache Kafka, Workflow Orchestration(Apache Airflow)
- **Database Management**: MySQL, Oracle, Microsoft SQL Server, Data Warehouse.
- **Cloud and Devops**: AWS (S3, Glue, Athena…), Docker , Gitlab(CI/CD)
- **Development Workflow**: Agile, Jira, Confluence, Git Version Control

LANGUAGE

English – Fluent Communication Skills: Fluent in English for technical communication and cross-functional collaboration in speaking and writing.