ALAN MABIA

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SUMMARY

Skilled professional with extensive experience providing top-notch technical skills in Information Technology Software Development. Proven leader delivering innovative and cost-effective solutions. Exceptional trainer and mentor able to connect with both technical and non-technical clients at every level. Self-motivated, proactive leader with superb technical acumen. Ability to thrive within fast-paced environments. Strong analytic and problem-solving skills:

Expertise	Tech Support/Problem Solving, Programming/Application Support, Software Migration/Porting, Web Service API design, Network management, Object oriented and real-time systems design.
Languages	JAVA, Scala, Python, C, C++, STL, XML, JSON, HTTP, Perl, SQL, POSTGRES, TCP/IP, Spring Framework, HTML5, JAVASCRIPT, JQuery, NodeJS, GraphQL, gRPC
Software	Docker, Livy, Spark, AWS S3, EMR, HDFS, Terraform, Apache Tomcat, Linux, MongoDB, Hadoop, ElasticSearch, CloudFormation, Swagger 2.0, OpenAPI 3.0, GIT, Coverity, Scrum and Agile technologies, Bugzilla, Linux, review board, Mercurial, Jira, Confluence, Firebase Cloud Messaging, Jenkins, GraphQL Playground, gRPC, NoSQL, Celery, ActiveMQ, RabbitMQ, MongoDB, SpringBoot

PROFESSIONAL EXPERIENCE

CHEGG INC, Santa Clara, California   **July 2021 – June 2023**
Staff Software Engineer

- Participated in the design, implementation, and testing of Chegg's AI-powered student acquisition platform.
- Collaborated with data scientists to develop and deploy a machine learning model leveraging collaborative filtering techniques to recommend personalized products to students, resulting in a significant increase in student sign-ups.
- Orchestrated the Promotion service, utilizing data-driven coupon distribution strategies, resulting in a 10% reduction in student acquisition costs.
- Architected, designed, implemented, and tested the Promotion and Pricing Spring Boot microservice for Chegg backend.
- These microservices power the student experience as they navigate through Chegg site, from creating a cart to completing the checkout flow.
- Deployed the services as Docker containers on AWS ECS FARGATE clusters and utilized Infrastructure as Code (IAC) with Terraform.
- Implemented and configured AWS API Gateway and Lambda functions to seamlessly consume real-time discount events from a third-party provider for the Promotion service. This setup improved the efficiency of discount updates, ensuring timely and accurate

information for students. Leveraged AWS cloud infrastructure and integrated with relevant technologies to achieve streamlined communication and maximize system scalability.
- Designed, implemented, and tested the brand consolidation framework, serving as a reusable platform to migrate companies acquired by Chegg to the Chegg ecosystem.
- The framework consisted of enricher, spooler, and migrator components, utilizing AWS Batch jobs to schedule and migrate user information, including payment records, from third parties.
- Utilized IAC with Terraform to create AWS resources such as Aurora DB, SNS, SQS, and MKS, and configured New Relic (NR) for monitoring the framework.

Environment and Tools: **JAVA, Spring Boot, Spring, Microservices, REST API, AWS S3, AWS Batch Job, AWS API Gateway, Lambda functions, Aurora DB, SNS, SQS, MKS, Docker, Terraform, New Relic, GraphQL, JOOQ, Kafka, Zookeeper**

OMNISCIENCE COORPORATION, Palo Alto, California   **July 2019 – July 2021**
Principal Software Engineer

- Developed and implemented Kaizen Server, an end-to-end managed Machine Learning platform with an integrated UI and mobile app.
- Designed and scheduled model training jobs through the intuitive Kaizen UI, supporting data sourcing from S3 buckets or HDFS while ensuring data security within the appliance.
- Streamlined model deployment by integrating with Livy REST API endpoints, enabling effortless deployment to Spark clusters or AWS EMR with just a few clicks in the web browser.
- Facilitated quick testing of model versions by initiating model inference directly from the browser.
- Leveraged Docker containers for flexible deployment of configurable Kaizen components, adaptable to both AWS and on-premises Linux machines.
- Created Kaizen Connect mobile app, available on iOS and Android devices, including iPad and Android tablets. The app incorporated 2FA authentication for enhanced security and presented model version performance metrics in graphical format.
- Implemented real-time model job notifications through a push scheme, ensuring instant updates for Kaizen admins.
- Contributed code to integrate Kaizen Server as a component for the DHS-GTAS open source project on GitHub.
- Redesigned and implemented OCR features for the MegaOCRServer, which were deployed on AWS EC2 with auto-scaling capabilities.

Environment and Tools: **JAVA, Scala, Python, JQuery, Spring Boot, PHP, Maria DB, ActiveMQ, ElasticSearch, Web Sockets, HTML5, JavaScript, JQuery, JQuery Mobile, AWS S3, EMR, HDFS, Docker, Apache Cordova Framework, Firebase, Terraform, Jenkins, Hadoop, Swagger 2.0, OpenAPI 3.0, GraphQL, GraphQL Playground, gRPC, MongoDB,CloudFormation, SpringBoot, NoSQL**

WESTERN DIGITAL, Newark, California   **Jan 2017 – July 2019**
Principal Software Engineer

- Spearheaded the redesign, implementation, and testing of a real-time notification and health monitoring framework for a multi-node High Availability (HA) cluster supporting the Tegile IntelliFlash Storage Platform.
- Utilized Java Spring Framework to introduce Task Service and Health Service, effectively managing notifications and ensuring the overall health of the storage system.
- Developed a comprehensive monitoring system for long-running tasks, including replication, LUN copy, AWS S3 Cloud backup, S3 Cloud Restore, and S3 Cloud objects deletion.

<u>**Environment and Tools**</u>: **SOLARIS, JAVA, HTTP, JSON, Apache Tomcat, AWS S3**

VIOLIN MEMORY, Santa Clara, California   **Jan 2015 – Dec 2016**
Senior Software Engineer

- Collaborated in the design, implementation, and testing of a 4-node High Availability (HA) stretch cluster for the Violin Memory Flash Storage Platform (FSP).
- Configured a HA pair of 2 nodes across separate subnets on 2 different sites, introducing the concept of Moving Virtual IP to manage failover/failback between the sites.
- Contributed to the design and implementation of the data-at-rest encryption feature including the management of cryptographic keys (KEK and DEK)

<u>**Environment and Tools**</u>: **LINUX, C, TCP/IP, HTTP, JSON, Perl, PHP, GIT, Review Board**

HEWLETT-PACKARD (HP), Fremont, California   **April 2008 – Dec.2014**
Senior Software Engineer

- Led the authoring, redesign, and implementation of the software architecture for the HP3PAR REST Web Service API (WSAPI).
- Designed and implemented an RBAC module, empowering system administrators to assign appropriate rights and permissions to different roles.
- Extended RBAC functionality to incorporate LDAP authentication.

<u>**Environment and Tools**</u>: **LINUX, Java, C, C++, STL, TCL, TCP/IP, HTTP, JSON, Perl, PHP, JQuery, JavaScript, HTML5, JQuery Mobile, MySQL, NodeJS, GIT, Coverity, Agile methodologies.**

AVANEX, Fremont, California   **April 2005 – April 2008**
Senior Software Engineer

- Undertook the re-engineering of the TL1 and SNMP management software architecture for Avanex PowerNode and CPL products.
- Redesigned and implemented the communication layer of the access modules, utilizing I2C and RS232 interfaces.

Environment and Tools: **LINUX, Java, C, C++, STL, TL1, TCP/IP, SNMP, VxWorks, Perl, Lumos and AdventNet Toolkits**

ALCATEL, Chelmsford, Massachusetts   **April 2002 – Jan. 2005**
Senior Software Engineer

- Developed and executed the design and implementation of the Test Access functionality for optical and DS3 cards in the Alcatel 1677SL system.
- Designed and implemented two fiber Bi-directional Line Switching Rings (BLSR) specifically for OC48 and OC192 interfaces.

Environment and Tools: **LINUX, Java, C, C++, STL, TL1, TCP/IP, SNMP, VxWorks**

LUCENT TECHNOLOGIES, Westford, Massachusetts   **Jan. 2001– Jan. 2002**

Senior Software Engineer

- Spearheaded the design and implementation of modules for ATM switches, specifically on the CBX-500 and GX-550 platforms.
- Developed code to enable Per-VC scheduling and Per-VC accounting for CBR and VBRrt traffics, ensuring adherence to QoS requirements within the network.

Environment and Tools: **LINUX, Java, C, C++, STL, TL1, TCP/IP, SNMP, VxWorks**

LUCENT TECHNOLOGIES, Red Bank, New Jersey   **Jan. 2000 – Jan. 2001**

Senior Software Engineer
- Participated in the reengineering of Lucent's optical network configuration management system.
- Re-designed existing Tuxedo server to self-contain services.

Environment and Tools: **LINUX, Java, C, C++, STL, TL1, TCP/IP, SNMP, SQL, XML**

MARGARDI INC, Ottawa, Ontario   **Jan. 1996 – Jan. 2000**

Software Engineer
- Designed, implemented and tested an SNMP Proxy to manage several networks devices.
- Developed the SNMP Proxy agent to service the Connection Manager servers.

Environment and Tools: **Windows, C, C++, STL, TL1, TCP/IP, SQL, and SNMP**

EDUCATION

M.A.Sc. Engineering
University of Ottawa, Ontario Canada

B.A.Sc. Engineering
University of Ottawa, Ontario Canada