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Core Competence

Solid functional and object-oriented programming skills; Extensive experience in system-level, data communication, and back-end programming.

Familiar with internals of deep learning programming framework (Julia's Flux, Python's Pytorch). Enthusiastic about the potential of Differential Programming, "Software 2.0".

Understanding of Machine learning algorithms particularly infrastructure (data pipelines, ETL processes, and data transformations), optimization, and productionization of machine learning models.

Self-motivated with strong collaboration and teamwork skills.

Software engineering based on rigorous goal-setting, problem-solving, and result-oriented approach with a strong emphasis on continuous integration and Agile methodologies

Proficient in Julia (1 year), Java (15+ years), Python, C, and Haskell.

A partial list of technologies: Spring, PostgreSQL, MySQL, Hadoop, Hive, Spark, Kafka, AWS, Docker, Kubernetes…

Professional Experience

2018-Present Mehrsoft,LLC

Survey of machine learning approaches, convex optimization, Gaussian process, end-to-end deep learning and software 2.0/differentiation programming.

Evaluation of Python and Julia for data exploration and modeling of trading data as stochastic processes. In depth study of Pytorch and Flux (Julia) framework's internal and programming model particularly for non-technical model developers.

Implementation of rough volatility models in Julia to support calibration of automated trading algorithms.

2014-2017 Apple Leisure Group

Implemented a real-time Open Travel Alliance (OTA) compliant hotel search service. Service accepts real-time OTA compliant rate, rules, availability and pricing notifications from partner hotels, and distribution systems as inventory updates; it provides OTA search compliant interface for querying the best rates for individual or groups. As a side project, designed a novel scheme to convert search and inventory to Linear Programming and used solvers to find the optimum options.

Implemented an OTA airline search and pricing service on top of Travelport Technology and Sabre Global Distribution System (GDS) API.

2013 Z2Live

Implemented Data pipeline to reliably collect and store vast amount of Z2Live's game servers business analytic events with minimal impact on the application. The event subsystem was designed with strict requirements on event loss and duplication. Events were uploaded to Amazon S3 for use by Business Intelligence (BI) tools using Apache Hive.

2011-2013 IjetOnBoard

Implemented messaging alternatives prototype for satellite connectivity solution of iJetOnBoard's GreenBox Platform. The study compared straight file transfer, ActiveMQ+ServiceMix, ZeroMQ, and Apache Qpid's AMQP 1.0 implementation using WANEM as satellite link simulation. Prototyped were used as demos to investors and guidelines for defining platform's system requirements.

2009-2011 Globys

Rules based AI and Machine learning techniques for Contextual Marketing Mobile Occasion engine. Automated data pipeline to import, cleanse, and generate model artifacts on continuous bases. Mentored the teams in their transition from .Net to Java/Open Source technology and best practices.

2007-2009 Qpass/Amdocs

Complete redesign of the front-end to Cingular's Qpass Service Management Platform (SMP) using TDD, Spring IOC, and continuous integration techniques.
Senior Developer on Amdocs's Discovery (catalog) Subsystem in Qpass Retail Suite .

2006 BEA

Apache Beehive Project Senior Developer (for BEA) on Apache Beehive's Web Service Metadata (WSM) and Web Service Control projects. WSM was an implementation of JSR-181, an annotation-driven programming model for web services.

2004-2005 Port Of Seattle

Impementation of Port of Seattle's Small Business Roster application. A self-enrolling roster for local small businesses to register their services and be certified as a vendor with the Port of Seattle. The SMBR application uses Apache's Lucene and WebSPHINX to automatically updated vendor's information from vendor's web site and create search indexes based on its contents for Port employees to find appropriate contractors for Port's projects.

Prior to 2004

Various projects in Nimble, Driftwood Software, Mccaw Cellular, ATT Wireless, Adaptive Corp, Touch Communication, Computer Pathways companies.

Education

MSEE, University of Washington, Seattle
Emphasis: Software Engineering, VLSI Chip Design, Signal Processing
BSEE, University of Washington, Seattle
Honors: Cum Lade and National Dean's List