CURTIS RUDER

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Summary

Software Product Owner and Development

- Product owner and lead developer for commercially licensed desktop application *PRISM™*
- Set software strategy, vision, sales, and marketing objectives
- Led code conversion of 85,000 lines of VB6 to VB.Net
- Ported relational database backend from Access to SQLite and retained backwards compatibility
- Coordinate all new and existing client facing activities from sales and product demonstrations through troubleshooting and software packaging
- Refactored critical runtime bottlenecks using object-oriented programming techniques which resulted in 80% runtime improvement and cleaner code
- Automated software data generation process using LP techniques, API calls, browser automation, and HTML parsing which resulted nearly 200 man-hour per month reduction

Refinery Optimization and Product Planning

- Experience using Aspen PIMS and other LP technologies to optimize refinery operations and blending activities
- Coordinated gasoline and distillate blending activities for major U.S. Gulf Coast refinery
- Developed and integrated Aspen PIMS LP yields for four conversion units and five hydrotreaters
- Calibrate and maintain refinery process models for all 125 active U.S. refineries leveraging nearly 25,000 publicly available data points per quarter
- Interface with stakeholders to interpret results and bolster data driven decisions

Process Engineering and Equipment Strategy

- Experience using Aspen HYSYS and other process simulation technologies to develop, maintain, and optimize steady-state process unit models
- Direct support experience for crude units, FCC, and cumene fixed bed alkylation unit
- Familiarity with operational objectives and limitations of nearly all fuels units
- Experience with process equipment sizing for heat exchangers and distillation trays
- Integrated OSIsoft PI and LIMS data to monitor system health and drive business decisions

Experience

Baker & O'Brien   Houston, TX   2017 – current

IT Strategy Lead   2021 - current

- Interviewed, negotiated with, and recommended a managed IT service provider
- Coordinated transition from outgoing IT staff and incoming managed IT service provider
- Intimately involved in project selection, justification, and coordination

Software Product Manager   2020 - current

- Product manager for commercial desktop application *PRISM™*
- Set software strategy, vision, and marketing objectives
- Interface directly with clients and business leaders to understand objectives and needs
- Develop and audit internal metrics for software quality and calibration productivity

Engineering Consultant   2019 - current

- Worked on multiple client projects leveraging experience and technical capabilities to delivery high quality work on time and on budget
- Leveraged self-developed LP framework on multiple 6 figure assignments
- Conducted market analysis on nearly all refining centers in the U.S.
- Developed IMO2020 predictive model and presented results at COQA industry conference

Software Developer   2018 - current

- Lead developer on 85,000 line code base conversion from VB6 to VB.Net
- Migrated database backend from 32-bit Microsoft Access to SQLite
- Optimized runtime issues resulting in a nearly 80% runtime reduction

- Data entry automation using browser automation, API end points, and direct HTTP requests
- Created LP framework which reduces the development time and complexity for LP studies

Refinery Modeling Specialist   2017 - current
- Maintain and improve refinery process models for all 125 U.S. refineries
- Parse nearly 25,000 data points per quarter to create industry look back
- Interface with software subscribers to share industry insights
- Leveraged automation and LP framework to eliminate 200 man-hours per month

Flint Hills Resources   Corpus Christi, TX   2012 - 2017

E&P Product Planner   2016 - 2017
- Executed weekly LP studies to determine buy / sell plans for gasoline blending intermediates, calibrate gasoline recipes, and drive economic decision making for project support
- Identified and remediated historically unoptimized gasoline opportunity worth $12MM / yr
- Championed RBOB terminal specification change worth $3.5MM / yr
- Led project justification effort for $5.0MM / yr blending debottlenecking project
- Overhauled Gasoline LP model improving accuracy and profitability
- Created and automated blending metrics and lookback process
- Temporary distillate planner coordinating all jet and diesel blending activities

E&P LP Model Development   2015 - 2016
- Responsible for improving existing LP accuracy. Improved representation of unit constraints, validated and updated flow routing flexibility, and calibrated yield profiles
- Created tools and statistical approach for integrating site OSIsoft PI and lab data (LIMS)
- Used multivariant regression analysis to develop and implement unit vectors for five hydrotreaters, two FCCs, coker, naphtha reformer, and hydrocracker units
- Coordinated blend study which improved non-linear blending interactions of gasoline blendstocks which reduced deviation between predicted and actual by more than 2x

Strategy Reliability Engineer   2013 - 2015
- Owned equipment strategy for FCC, HF alky, cumene, and coker units
- Executed root cause failure analysis (RCFA) and resolved failure modes
- Developed work scope and strategy for cumene unit turnaround
- Created and delivered company-wide training sessions on Weibull and predictive models

Process Engineer   2012 - 2013
- Aspen HYSYS site lead for process unit modeling
- Supported FCC and fixed bed alkylation
- Mentored four process engineers as temporary team lead
- Created unit monitoring tools, automated monthly reports, and created visualization template for unit monitoring that became base expectation for all process engineers
- Championed emissions reduction effort via FCC fullburn transition. Resulting documentation and justification methodology was referenced as best practice for future operational studies

NCRA Refinery (CHS Inc)   McPherson, KS   2009 - 2012

Process Engineer   2009 - 2012
- Supported refinery crude and light ends units
- Lead overnight Process Engineer on major refinery turnaround
- Owned turnaround exchanger cleaning strategy

Skills

Aspen HYSYS	Aspen PIMS	C++	C#	CSS
Git	HTML	HTTP	Java	Javascript
JSON	MS Office	SASS / SCSS	SQL	Subversion
VB.Net	VBA	Visual Studio	VS Code	XML

Education

Fort Hays State University	**B.S. Computer Science (4.0 / 4.0)**	2020 - 2022
Texas A&M – Corpus Christi	**MBA Finance Concentration (3.9 / 4.0)**	2016 - 2019
Kansas State University	**B.S. Chemical Engineering (3.6 / 4.0)**	2004 - 2009