

KONSTANTIN SERMYAGIN

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Results-Driven Software Developer and Machine Learning Engineer with Expertise in Data Science, Web Development, and Reservoir Engineering

SUMMARY OF QUALIFICATIONS

- ▷ **Software Development Proficiency:** Proficient in software development with a focus on full-stack web development, machine learning, and data analysis. Skilled in a variety of programming languages and frameworks.
- ▷ **Data Science Enthusiast:** Passion for data science and data analysis, with experience in developing and implementing machine learning algorithms for complex problem-solving.
- ▷ **Reservoir Engineering Expertise:** Seasoned reservoir engineer with a track record of optimizing reservoir management, maximizing hydrocarbon recovery, and increasing reserves across global projects.
- ▷ **Project Management and Leadership:** Proven ability to lead cross-functional teams, streamline CI/CD pipelines, and manage project timelines, ensuring timely and successful project delivery.
- ▷ **Interdisciplinary Knowledge:** Ability to leverage knowledge from various computational areas, bridging the gap between technical domains and fostering innovation.
- ▷ **Continuous Learning and Adaptability:** Committed to staying at the forefront of emerging technologies and eager to take on new challenges and opportunities.

SKILLS AND ACCOMPLISHMENTS

Software Development

- **Machine Learning Development:** Successfully integrated new gas pipelines into the machine learning workflow, improving overall system efficiency and performance.
- **Database Design and Development:** Established and curated database tables, coupled with the implementation of Lambda functions, resulting in robust data management solutions.
- **Software Engineering:** Strategically revamped the machine learning implementation by leveraging Step Functions, enhancing system efficiency and user experience.
- **Front-End Enhancement:** Improved the performance of Angular components, leading to a more user-friendly interface and better user experience.
- **Programming Languages:** Proficient in core Python, used for a variety of data analysis and software development tasks.
- **Machine Learning Tools:** Utilized libraries such as pandas and scikit-learn for data analysis and machine learning model development.
- **AWS Services:** Extensive experience with AWS services, including ECS, S3, CodeCommit, SageMaker, PostgreSQL RDS, Secrets Manager, Lambda, and Step Functions.
- **Web Development:** Developed and enhanced web applications using TypeScript and Angular, improving user interaction and experience.

- **Version Control:** Managed version control using Git, ensuring efficient collaboration on software development projects.
- **Project Management:** Streamlined the CI/CD pipeline and managed project timelines, resulting in improved efficiency and reliability of software delivery.

Reservoir Engineering

- **Reservoir Management Expertise:** Extensive experience in optimizing reservoir management, maximizing hydrocarbon recovery, and increasing reserves across global projects.
- **Reservoir Simulation:** Proficient in reservoir simulation, including history matching and economic modeling, enhancing decision-making processes.
- **Multi-Phase Problem Solving:** Developed a machine-learning stack to address complex multi-phase issues in unconventional volatile oil production, improving well performance.
- **Automation:** Created applications and scripts to automate essential reservoir engineering tasks, such as decline curve analysis and simulation result post-processing.
- **Cross-Functional Collaboration:** Organized and delivered programming lunch-and-learns, fostering knowledge sharing among subsurface professionals.
- **Innovative Solutions:** Engineered an interface between reservoir simulation software and a third-party program, improving data integration and analysis.
- **Probabilistic Modeling:** Incorporated probabilistic calculations and risk analysis into history matching and forecasting, enhancing decision accuracy.
- **Reservoir Characterization:** Developed an integrated methodology for estimating reservoir characteristics based on well performance indicators, enabling precise reservoir assessments.
- **Mentorship and Leadership:** Mentored junior reservoir engineers and team members, contributing to their professional growth.
- **International Project Management:** Orchestrated reservoir engineering work in international gas assets, delivering substantial reserve increases and successful project outcomes.

CORE TECHNOLOGIES

- ▷ **Programming Languages:** Python, TypeScript, Wolfram (Mathematica), LISP, C.
- ▷ **Libraries:** pandas, scikit-learn, keras, TensorFlow, plotly, dash.
- ▷ **Frameworks:** Angular, React.
- ▷ **Databases:** PostgreSQL, MS SQL, MongoDB.
- ▷ **AWS Services:** ECS, S3, CodeCommit, SageMaker, RDS, Secrets Manager, Lambda, Step Functions.
- ▷ **Project Management Methodologies:** Agile, Scrum.
- ▷ **Version Control:** Git.

PROFESSIONAL EXPERIENCE

ARCURVE , Houston, TX <i>Software Developer III</i>	2020 – 2023
READAS , Houston, TX <i>Founder / Software Developer / Reservoir Engineer</i>	2019 – Present
BHP , Houston, TX <i>Principal Reservoir Engineer / Data Scientist</i>	2012 – 2019

EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY <i>Executive Education</i>	2018
HERIOT-WATT UNIVERSITY <i>MS Petroleum Engineering</i>	2002
BASHKIR STATE UNIVERSITY <i>BS Chemistry</i>	2001

KEYWORDS

Reservoir Engineering, Full-Stack Development, Data Science, Machine Learning, Software Engineering, Web Development, Python, Pandas, Scikit-Learn, TensorFlow, Project Management, Cross-Functional Teams, CI/CD Pipeline, Data Analysis, Reservoir Management, Reservoir Simulation, Interdisciplinary Knowledge, Continuous Learning, Optimization, Leadership, International Project Management, Mentorship, Integrated Methodology, Problem-Solving, Innovation, Git