

# James S. Ritter, B.S.

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A highly driven software and data engineer with a proven track record of building scalable platforms and full-stack applications to streamline workflows and enable real-time insights. Currently pursuing a Master's in Computer Science and a Master's in Health Care Informatics, combining technical expertise with industry-specific knowledge to deliver impactful solutions. Skilled in industry-standard data pipeline development, database architecture design, data visualization, and web development, with experience in advanced manufacturing and a passion for creating innovative software and data solutions for diverse industries, including healthcare.

Skills	Experience
<div>Programming:</div> <ul style="list-style-type: none"><li>Python</li><li>Java</li><li>JS/TS</li><li>Bash</li><li>C/C++/C#</li></ul> <div>Databases:</div> <ul style="list-style-type: none"><li>MongoDB</li><li>Cassandra</li><li>Redis</li><li>Postgres</li><li>MySQL</li><li>MS SQL Server</li></ul> <div>Data Engineering:</div> <ul style="list-style-type: none"><li>Apache Kafka</li><li>Apache Airflow</li><li>AWS</li></ul> <div>Software Engineering</div> <ul style="list-style-type: none"><li>Docker</li><li>Ubuntu/Linux</li><li>Git/Github</li></ul> <div>Web Development:</div> <ul style="list-style-type: none"><li>Flask</li><li>Django</li><li>React</li><li>Vite</li><li>SpringBoot</li><li>Apache HTTPD</li><li>Nginx</li></ul> <div>Spoken Languages:</div> <ul style="list-style-type: none"><li>English</li><li>Persian</li><li>Spanish</li></ul>	<div><b>Data Engineer</b></div> <div><i>Sakuu Corporation</i></div> <div>Jan 2023 – Present</div> <ul style="list-style-type: none"><li>Designed and developed a comprehensive data management platform to support manufacturing and engineering operations at an advanced manufacturing (AM) startup in the battery development space.</li><li>Built robust ETL pipelines to process and centralize battery testing data in a PostgreSQL database, replacing manual data conversion with automated workflows.</li><li>Integrated Apache Kafka-based data streaming capabilities to procure live data from AM-platform tools and sensors, enabling real-time processing manufacturing hardware data.</li><li>Enhanced data architecture by introducing a MongoDB storage solution for semi-structured and timeseries data, improving scalability and efficiency.</li><li>Utilized Docker to containerize applications, ensuring scalable, consistent deployments across environments.</li><li>Engineered an end-to-end cradle-to-grave tracking system that maps raw materials through processing, production, testing, quality control, and final output.</li><li>Developed an interactive dashboard using React and Flask, in-house, that allows engineers to visualize and analyze material process and production data, providing real-time visibility across all engineering teams.</li><li>Collaborated with cross-functional teams to incorporate project management capabilities, linking all manufacturing and testing data to individual projects for streamlined tracking and reporting.</li><li>Championed automation and centralized data solutions, enabling real-time insights and significant efficiency improvements in manufacturing and engineering operations.</li></ul> <div><b>IT &amp; Informatics Specialist</b></div> <div><i>Star Dental Cosmetic &amp; Implant Center</i></div> <div>Aug 2022 – Aug 2023</div> <ul style="list-style-type: none"><li>Spearheaded a comprehensive IT infrastructure redesign to eliminate bottlenecks and single points of failure, improving network uptime by over 300%.</li><li>Developed custom applications to streamline dental patient check-in and check-out processes, improving clinical workflows and reducing cognitive burden for staff.</li><li>Developed a meticulous payment auditing system using MS Excel macros which uncovered over \$45,000 in outstanding payments</li><li>Designed and maintained Tableau dashboards to monitor quarterly clinician performance and inform strategic decisions.</li><li>Planned, implemented, and oversaw a new sleep apnea monitoring service, enabling in-house sleep apnea testing and improving patient care delivery.</li></ul>

Education	M.S. Computer Science	M.S. Health Care Informatics	B.S. Pharmaceutical Sciences
	Johns Hopkins University 2023 – 2025 (exp.)	University of San Diego 2023 – 2025 (exp.)	University of California, Irvine 2014 - 2019