Reggie Collette

reggie.collette2025@gmail.com • Urbandale, IA
515-971-7720 • www.linkedin.com/in/reggie-w-collette
www.reggiecollette.com

SUMMARY

Distinguished data science and analytics leader with 20+ years applying statistical modeling, machine learning, forecasting, anomaly detection, and optimization to large-scale critical infrastructure systems. Proven record building enterprise forecasting platforms, automating ETL workflows, mentoring technical teams, and translating complex operational data into executive-level decisions. Experienced with SQL, R, TensorFlow, time-series modeling, data validation, dashboarding, and production-oriented analytics workflows, with deep expertise in asset capacity, performance, reliability, and investment planning.

EXPERIENCE

T-Mobile, Des Moines, IA **Aug 2025 – Current**

Distinguished Member Technical Staff

- Apply data science, statistical analysis, and deep 5G RAN domain expertise to identify L1/L2 feature opportunities, improve scheduler algorithms, quantify spectral-efficiency gains, and guide executive strategy and vendor software roadmaps.
- Integrate disparate datasets from PostgreSQL, Snowflake, and other enterprise sources; use R, SQL, and analytical storytelling to convert messy operational data into executive-ready recommendations.
- Supported T-Mobile/UScellular network integration by rapidly analyzing large, complex data spaces, identifying operational risks and opportunities, and coordinating data-driven recommendations across technology and business stakeholders.

UScellular, Des Moines, IA **2002 – Aug 2025**

Distinguished Member Technical Staff **Mar 2023 – Aug 2025**

- Led UScellular's presence as a strategic voice at industry events (e.g., Network X, O-RAN North America, IWPC), influencing innovation conversations for topics like AI-in-RAN, expanding brand authority, and applying cutting-edge technology insights.
- Developed M/G/1 capacity modeling methodologies to forecast infrastructure demand; trained enterprise teams on model application and monitored model drift, validation results, and performance using Hive/Hadoop data pipelines.
- Architected and led the implementation of an early RAN disaggregation and O-RAN ready strategy, delivering a 30% improvement in network modernization costs while enhancing network resilience and creating more scalable and intelligent networks designed for future innovation.
- Led the implementation and automation of a UE emulator test bed (Viavi TM500), delivering a scalable lab capability that doubled test coverage, minimized deployment risk, and established critical testing infrastructure for O-RU and O-DU O-RAN compliance.
- Led high-value RFPs exceeding $10 million per project, securing an average of 15% cost savings through strategic negotiation while accelerating the rollout of critical new features and software.
- Led the architecture and deployment of 5G RAN slicing, partnering closely with executive leadership across multiple business units to align on strategic priorities; delivered a 20% performance improvement for high-value users and protected revenue streams during exponential data growth.
- Recognized as the go-to leader for new technology trials, spearheading initiatives whenever multiple business units are impacted to ensure successful evaluation, deployment, and adoption of new technologies and features.

Principal Engineer **Oct 2020 – Feb 2023**

- Spearheaded TensorFlow-based machine learning adoption within capacity planning workflows, significantly improving the accuracy of short-term predictive models while mentoring team members on ML best practices to strengthen overall analytical capabilities.

- Built reproducible analytics workflows using version-controlled code, documented assumptions, validation methods, and model outputs for technical and non-technical stakeholders.
- Developed 3GPP-based throughput models to define the radio network evolution roadmap over a 5-year planning period supporting a budget of over $400 million; reduced the budget planning cycle by 40% with a data-first approach and achieved $20 million in budget savings through lowered technology modernization requirements.
- Led development of transport capacity models using M/G/R-PS queueing theory, cutting deployment costs by 50% and accelerating deployment by over a year; mentored team members to build modeling expertise and foster innovation.
- Automated anomaly detection algorithms, preventing unnecessary upgrades and saving $7 million in capacity deployment costs.
- Drove enterprise-wide strategy by developing methodologies to predict spectral efficiency trends, enabling executive planning and proactive investment decisions that mitigated future network pain points and avoided unnecessary deployment costs.

Lead Engineer **Jun 2017 – Sep 2020**

- Developed and implemented an enterprise-wide forecasting platform in R that saved over $62M in its first year and scaled a team of 7 engineers to establish a sustainable infrastructure capacity planning program.
- Platform supported ARIMA forecasting, anomaly detections (and corrections), seasonality, and demand inputs from marketing and the business units.
- Developed parallelized forecasting compute engines (192-core R-based computation) to support high-dimensional time-series modeling, reducing processing time by over 80% and increasing iterative capabilities.
- Automated ETL processes to reduce data pipeline processing time by over 90%, improving efficiency and deferring costly infrastructure upgrades.
- Architected enterprise-wide Quality-of-Service (QoS) framework models while partnering with multiple business units to enhance revenue streams and reduce customer churn; received executive-level recognition for driving significant improvements in customer experience and monetization strategies.

Senior Engineer **Nov 2013 – May 2017**

- Developed and tuned RF propagation models that improved accuracy and reduced the cost of new market deployments by reducing the total number of sites required to meet service requirements.
- Led custom antenna pattern testing that accelerated 4G deployments by 1 year on sites with deployment challenges.

RF Engineer **Jan 2005 – Oct 2013**

- Optimize existing network performance, delivering 10% year-over-year improvements.
- New market builds, zoning hearings, site acquisition.

EDUCATION

Western Governors University, Salt Lake City, UT
Master of Science, Computer Science – AI and Machine Learning **Oct 2026**
Iowa State University, Ames, IA
Bachelor of Science, Electrical Engineering **2004**

SKILLS

Certifications:
AWS Certified Machine Learning Engineer Associate (MLA-C01, ID# 533606143)
Data Science Specialization, Coursera (by Johns Hopkins University)
Machine Learning Specialization, Coursera (by Stanford University)
Cloud Native Development w/ OpenShift & Kubernetes, Coursera (by Redhat, Credential ID Q3FVZYIR9YL8)

Languages and Tools: R, SQL, Python, TensorFlow, R Shiny, Hive/Hadoop, EC2, Tableau, Colab, VS Code, Git, Conda, PyCharm, R Studio.

Data Science and Analytics: Neural Networks, ML models, Scikit Learn, supervised learning, unsupervised learning, KNN, linear regression, logistic regression, multivariate regression, time series, forecasting, ARIMA, anomaly detection, simulation, queueing theory, data cleaning, A/B testing, big data exploration, data visualization, AI, model training, inference, back testing.
DataOps and Deployment: ETL automation, near real-time dashboards (knitr, shiny, html), parallel computing (parallel, snowfall), Kubernetes, automation, data integrity, AWS MLA-C01 Certified.
Network and Architecture: 4G, 5G, 3GPP Standards, O-RAN standards, Open interfaces, RIC, rApps, xApps, Orchestration, AI RAN, RAN architecture, Transport, Fronthaul, RAN Physical Layer, RAN Centralization, virtualization, cloud RAN, lab environments, emulators, RF channel modeling, call modeling, RF link budgets, RF theory, interference analyses, capacity planning, coverage planning, propagation model tuning, spectrum analyzers, network analyzers, antenna analyzers, QXDM, TEMS, layer 3 messaging, physical layer procedures, anechoic chambers, RF predictions, system performance, network trials, network maintenance, FCC regulations, FAA regulations, NGMN, 5G Americas, GSMA, O-RAN Alliance, ETSI.

JOURNAL PUBLICATIONS

Published eight journal papers in the annual UScellular technical journal. A list of technical journal publications is available at www.reggiecollette.com.