# KIRSTEN ARRIES

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## JUNIOR DATA SCIENTIST

Dynamic and results-driven professional with a passion for web development and data science, complemented by a strong foundation in Python programming, SQL/SQLite, Git, and GitHub. My journey in technology was solidified by completing a rigorous Data Science Bootcamp at Stellenbosch University in collaboration with HyperionDev in September 2024. With a background in diagnostic radiography, I bring a unique perspective to problem-solving, blending analytical skills with a deep understanding of human-centred design. I am eager to transition fully into a junior Python developer or entry-level data science role, driven by an unwavering love for programming and a commitment to continuous learning. Proven ability to work collaboratively in small, agile teams and an enthusiasm for tackling complex challenges position me to contribute meaningfully to innovative projects and forward-thinking teams.

## TECHNICAL EXPERIENCE

**Data Science Bootcamp |** Stellenbosch University and HyperionDev                    03/2024 - 09/2024

The Data Science bootcamp covers Python, probability, statistics, data science libraries and fundamental machine-learning concepts.

- Achieved an average grade of 98%, ranking 5th in a cohort of 1,371 students.
- Mastered Python programming and key data science libraries, including NumPy, pandas, and scikit-learn, within six months.
- Implemented end-to-end features using Python and Django for three backend development capstone projects, enhancing problem-solving skills and teamwork during debugging sessions.
- Completed five real-world projects, including:
- Ames Housing Price Prediction Model: Developed a multiple linear regression model to predict house prices based on property features.
- Titanic Survival Prediction: Created a machine learning classification model to predict passenger survival using scikit-learn.
- Gained hands-on experience in data manipulation, analysis, statistics, probability, and fundamental machine learning and artificial intelligence concepts.
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**AI Data Analyst Intern |** Excelerate                    10/2024 – 11/2024

- Remote one month internship.
- Conducted in-depth data analysis to uncover patterns and actionable insights, improving project outcomes.
- Collaborated with interns world wide to analyze data regarding student drop out rates at a university.
- Visualized key insights and trends, enabling data driven decision making.
- Presented findings effectively showcasing results and recommending strategies for optimization.

**Diagnostic Radiographer |** Morton and Partners                    07/2024 – Current

- Managed image archiving and performed advanced computed tomography (CT) imaging.
- Operated imaging equipment, including digital x-ray machines, C-arm, and panorex systems.
- Utilized 3D visualization software to analyze imaging data for diagnostic purposes.
- Applied pattern recognition techniques to medical imaging for accurate diagnostics.
- Collaborated with multidisciplinary teams to optimize patient outcomes and imaging efficiency.

**Diagnostic Radiographer |** Tygerberg Hospital                    01/2023 - 07/2024

- Performed diagnostic imaging services at Tygerberg Hospital, the second-largest healthcare facility in Africa, ensuring high standards of patient care and imaging quality.
- Collaborated with 13+ radiologists and 30+ radiographers to ensure imaging quality and patient care.
- Trained and mentored radiography students, from Cape Peninsula University of Technology, in imaging techniques and equipment operation.
- Leveraged pattern recognition skills for interpreting complex medical imaging results.
- Facilitated cross-functional communication within a multidisciplinary healthcare team.
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**Diagnostic Radiographer Intern |** Koster District Hospital                    01/2022 - 07/2022

- Performed diagnostic imaging services at Koster District Hospital.
- Handled stock-taking and ordering of supplies to keep department well-equipped.
- Collaborated well with doctors to support patient care and diagnostic needs.
- Implemented a platform for seam-less sharing of x-rays, improving communication and work-flow.
- Performed QC (Quality Control) and QA (Quality Assurance) for CR x-ray equipment to maintain standard.
- Actively participated in departmental meetings to address challenges and drive improvements.

## TECHNICAL PROJECTS

**Ames Housing Price Prediction**

- Developed a multiple linear regression model to predict sales prices for houses in Ames, Iowa.

- Leveraged Python libraries: pandas, matplotlib, seaborn, and scikit-learn.

**Inc 5000 2014 Dataset Analysis**

- Created Tableau dashboards to visualize data on the 5000 fastest-growing U.S. companies, analyzing industry trends, workforce growth, and geographic distributions.
- Natural Language Processing (NLP): Garden Path Sentences


- Applied NLP techniques with spaCy to analyze and interpret complex garden path sentences.

**Titanic Survival Prediction**

- Designed machine learning models (Decision Trees, Random Forest, Gradient Boosting) to predict passenger survival using the Titanic dataset.

**Online Weather Application**

- Built a dynamic web application to provide real-time weather updates, including temperature, humidity, wind speed, and 5-day forecasts.
- Integrated JSON APIs and added interactivity using JavaScript, with CSS for styling.


## TECHNICAL SKILLS

- **Web Development**: Proficient in HTML, CSS, and JavaScript for creating responsive and interactive websites.
- **Programming Languages**: Advanced knowledge of Python, with experience in Ruby and Delphi.
- **Databases**: Skilled in SQL and MySQL for data querying and database management.
- **Data Analysis**: Expertise in data manipulation and analysis using SciPy, NumPy, pandas, and scikit-learn.
- **Data Visualization**: Proficient in creating insightful visualizations with Matplotlib, Seaborn, and Tableau.
- **Machine Learning & AI**: Practical experience with algorithms including K-Nearest Neighbours (KNN), Naive Bayes, Decision Trees, Random Forests, and Regression models.
- **Version Control**: Proficient in Git for managing code repositories and collaborative development.
- **Medical Imaging**: Extensive experience in computed tomography (CT) and x-ray equipment handling, including pattern recognition in diagnostic imaging.


## SOFT SKILLS

- **Attention to Detail**: Meticulous in analyzing data and producing accurate results.
- **Collaboration**: Proven ability to work effectively both independently and within multidisciplinary teams.
- **Adaptability**: Thrives in high-pressure environments with the ability to quickly adjust to new challenges.
- **Problem Solving**: Strong analytical skills to identify issues and implement effective solutions.
- **Communication**: Excellent interpersonal and written communication skills for conveying complex concepts clearly.
- **Time Management**: Highly organized, ensuring tasks are prioritized and deadlines are consistently met.
- **Teamwork**: Skilled in fostering a collaborative environment and working seamlessly across departments.


## EDUCATION & CERTIFICATIONS

- **Data Science Bootcamp** | Stellenbosch University & HyperionDev          03/2024 - 09/2024
- **Web Development Certification** | Sololearn & Self-study          05/2023 - 11/2023
- **Ruby on Rails Full Stack Development** | Optimi College          01/2023 - 10/2023
- **Bachelor of Diagnostic Radiography** | Cape Peninsula University of Technology (CPUT)          01/2018 - 11/2021

## ACCOMPLISHMENTS

- Ranked in the top 5 of 1,371 students with a 98% grade average in the Data Science Bootcamp.
- Completed five practical projects demonstrating proficiency in machine learning, data visualization, and backend development.
- Gained hands-on experience in database management and advanced data analytics through independent learning and professional practice.


## REFERENCES


Available on request.