

SUMMARY

Senior software engineer with 4+ years experience and machine learning and AI background. Knowledge of designing, building, and deploying software, data pipelines, and building and training machine learning models.

TECHNICAL SKILLS

- **Languages and Libraries:** Java 21, Python, Guava, BigQuery, PostgreSQL, Tensorflow, Keras, Numpy, Pandas, Scikit, LightGBM, Bash, SQL, MATLAB
- **Technologies:** Linux, Maven, Gradle, Git, Gitlab, Docker, K8s, AWS, Google Cloud, Vim, IntelliJ
- **Skills:** Simulation, Pipelines, Big Data, Testing, Re-factoring, Debugging, CI/CD, Design Patterns, Statistical Analysis, Regression, Classification, Computer Vision, Time Series, Data Visualization, Data Preparation, ML Algorithms, Principal Component Analysis (PCA), Biomedical Imaging, Mentorship and Teaching

EXPERIENCE

- **PortSwigger** Knutsford, UK
Software Developer *Jun. 2023 - Present*
 - **Burp Suite:** Building features for and maintaining the industry leading web pentesting platform.
 - **AI Features:** Designing, building, and deploying containerized code generation RAG service in kubernetes on AWS with observability and custom evaluation pipeline.
 - **Community Events:** Organizing and presenting user facing presentations on features and development updates.
 - **Mentorship:** Participated in the mentorship program for graduate and junior software developers.
- **Ocado Technology** Hatfield, UK
Software Engineer *Feb. 2021 - May 2023*
 - **Data Manipulation:** Creating a program to manipulate simulation input data to meet configurable statistical distributions and targets.
 - **Simulation Fidelity:** Improving the accuracy and confidence in simulations of automation control systems. Built reporting systems, pipelines, data objects, and event schema to analyze data from production and corresponding simulations.
 - **Warehouse Automation:** Implementing algorithms for new layouts, robots, and hardware. Creating simulation experiments to test and validate the performance of the warehouse with various possible configurations.
- **LifeStyle AI** London, UK
Software Engineer *Feb. 2020 - Feb. 2021*
 - **Nutrition and fitness app:** Multivariate time series body weight prediction with macro nutrient and food recommendation.
- **Western University** London, ON, Canada
Graduate Teaching Assistant *2017 - 2019*
 - **Teaching Assistant - Introduction to Electrical Engineering:** Course teaching engineering undergraduate students electrical circuits and electrical engineering principals. Involved running labs and grading.
 - **Teaching Assistant - Programming Fundamentals for Engineers:** Course for teaching object oriented programming to undergraduate engineering students.

EDUCATION

- **Western University** London, ON
Masters of Engineering Science in Electrical & Computer Engineering M.E.Sc *2017 - 2020*
 - **Automated Segmentation of Temporal Bone Structures:** Developed and trained a custom computer vision machine learning model to automatically segment anatomic structures in the temporal bone for the purpose of simulating mastoidectomy surgery.
- **Western University** London, ON
Bachelor of Engineering Science in Computer Engineering B.E.Sc *2013 - 2017*
 - **University of Western Ontario Gold Medal in Computer Engineering:** Awarded for highest grade in program.

KEY JOURNAL PUBLICATIONS

- **Automated Segmentation of the Sigmoid Sinus using a Multi-Atlas Approach:** D. G. Allen et. al, 2019
- **Multi-atlas segmentation of the facial nerve from clinical CT for virtual reality simulators:** Brad Gare, D. G. Allen, et. al, 2019
- **Morphological analysis of sigmoid sinus anatomy: clinical applications to neurotological surgery:** Kylan Van Osch, D. G. Allen, et. al, 2019