

Allysson Allan

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SUMMARY

I am working with genomics and bioinformatics for more than 15 years in public research institutes and universities in Brazil and Italy, also in private companies health security, retail pharma and hospitals in Brazil and the US. I have a position as Visiting Professor at the Federal University of Ceará, applying a recent theoretical approach with ancient DNA study to advance translational medicine. Furthermore, I had a recent role as Chief Technology Officer at Genie TechBio Inc., co-developing Genie, the first AI bioinformatician based on Large Language Model for single-cell analysis, which simplifies and accelerates omics data interpretation for wet-lab researchers.

EXPERIENCE

Visiting Professor

Federal University of Ceara

November 2023 - Present, Fortaleza, Ceará, Brazil · On-site

- Bioinformatics collaboration in 7 research projects involving omics and tertiary analysis.
- Conduct research on 5 projects in different areas such as bioinformatics, human genomics population, and medical population genetics.
- Administrative role in "siara" HPC cluster.
- Taught advanced bioinformatics courses to graduate students, enriching the curriculum with hands-on exercises in sequencing analysis and data interpretation, directly contributing to a 30% increase in research productivity.

Chief Technology Officer

Genie TechBio Inc.

January 2024 - January 2025, Delaware, United States · Remote

- Co-founder and CTO of the first bioinfo in the world;
- Bulk and single-cell analysis with clients from other biotech startups;
- First prototype delivered in three months;
- Achieved conversation with Genie, enabling researchers to focus on science while Genie handles data analysis.

Bioinformatics Manager

Fundação Oswaldo Cruz (Fiocruz)

May 2023 - November 2023, Fortaleza, Ceará, Brazil · On-site

- Led a creative team in developing genomic panel solutions for diverse clinic conditions, troubleshooting NextSeq2000 and Miseq, and supporting wetlab operations;
- Successfully obtained approval for 6/6 projects in less than six months;
- Collaborated with the team to enhance genomic surveillance and pangenomic tests, contributing to cutting edge research in the field.

AI Lab founder and specialist

Farmácias Pague Menos

September 2022 - April 2023, Fortaleza, Ceará, Brazil · On-site

- Led a datadriven team of three developers and two data scientists to develop intelligent solutions for the company.
- Automated and reprocessed hourly goals for each store to achieve company milestones efficiently.
- Pioneered an AI laboratory that developed predictive analytics solutions, leading to a 15% improvement in inventory management across 1300+ stores through machine learning models employing Python and TensorFlow.

Analytics Specialist

Farmácias Pague Menos

June 2022 - April 2023, Fortaleza, Ceará, Brazil · On-site

- Developed machine learning models for predictive analytics in a fastpaced retail pharmacy company;
- Implemented data pipelines and largescale data processing for disruptive products based on ML models;
- Collaborated with crossfunctional teams to ensure alignment of ML models with production processes.

Data Scientist and Bioinformatician

Hospital Israelita Albert Einstein

September 2021 - June 2022, São Paulo, Brasil · Remote

- Developed and implemented WGS/WES DRAGEN/GATK routines in AWS cloud using WDL/Cromwell workflows.
- Managed joint genotyping vcf from largescale genomic databases and clinical data using pyspark/hail.
- Collaborated on code practices to innovate genomic test processes at Hospital Israelita Albert Einstein.

Postdoctoral Research Scientist

Università degli Studi di Padova

September 2020 - December 2021, Pádua, Vêneto, Itália · Remote

- Improved a new method to estimate polygenic risk scores for admixed individuals.
- Handled 500,000 genomic data samples from the UK-Biobank project using the rocket HPC at the University of Tartu (Estonia).
- Inference of local ancestry and management of GWAS summary statistics data.

Bioinformatics Scientist

Universidade Estadual da Paraíba

March 2014 - October 2021, Campina Grande, Paraíba, Brasil

- Handling genomic array data from admixed individuals and creating hypothesis about candidate genes.
- Investigating recessive genetic diseases in high consanguineous communities.

- Developed bioinformatics pipelines utilizing Python and R to analyze large-scale genomic datasets, enhancing data processing speed by 30% and improving accuracy in identifying genetic variations.

Data Scientist

Hapvida

May 2020 – August 2020, Fortaleza, Ceará, Brasil

- Building the historical, prediction, and prevention squads in the first data science dedicated department.
- Designed and implemented machine learning models that improved prediction accuracy by 25%, leveraging Python, R, and TensorFlow to analyze complex datasets and deliver actionable insights for strategic decision-making.
- Developed and validated a predictive analytics framework that forecasted patient admission rates with 90% accuracy, utilizing tools such as Python and Tableau, resulting in a 15% improvement in resource allocation efficiency.

Diretor

Armorial Consultoria

June 2019 – August 2020, Fortaleza

- Data Science and Bioinformatics consulting for research institutes.
- Delivered classes to diverse companies looking for data-driven solutions.
- Orchestrated strategic initiatives that improved client acquisition by 25%, leveraging in-depth data analytics and bioinformatics consulting services tailored to the needs of prestigious research institutes and corporate partners.

EDUCATION

Doctor of Philosophy – PhD, Genetics

USP – Universidade de São Paulo • São Paulo • 2018

- CAPES full scholarship. WGS, WES and snp array.

Master's degree, Archaeology

Universidade Federal de Pernambuco • 2013

- Full scholarship CAPES; Spectroscopy data using R; Radiocarbon dating.

Licentiate and Bachelor of Science degree, Biological Sciences

Universidade Estadual da Paraíba • Campina Grande, Paraíba • 2010

- Genomics and evolutionary biology

CERTIFICATIONS

Multi AI Agent Systems

CrewAI • 2024

Generative AI learning plan for decision makers

Amazon Web Services (AWS) • 2024

Bioinformatics for Biologists: Analysing and Interpreting Genomic Datasets

Wellcome Connecting Science Engagement and Society • 2023

DevOps, DataOps, MLOps

Coursera Course Certificates • 2023

AI for Medical Diagnosis

DeepLearning.AI • 2023

SAP Data Intelligence for Enterprise IA

SAP • 2023

AWS Partner: Accreditation (Technical)

Amazon Web Services (AWS) • 2021

Linguagem R

Coursera Course Certificates • 2015

COURSEWORK

VI Advanced School in Big Data Analysis / ICMC USP

2022

SKILLS

Industry Knowledge: Bioinformatics, Artificial Intelligence (AI), LLM, Executive Management, Data Science, Project Management, Deep Learning, Research and Development (R&D)

Tools & Technologies: Amazon Web Services, Python, R, Nextflow, Snakemake, GCP, Azure, DigitalOcean, Slurm, Proxmox.

Other Skills: Large Language Model Operations (LLMOps), CI/CD, Agentic workflows.
