Dumisani Chambela

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Profile

I am a Bachelor of Science student in Computer Science and Computer Engineering at the University of Cape Town, passionate about solving real-world challenges through innovative technology. I am skilled in developing scalable solutions, optimizing algorithms, and collaborating with diverse teams. Proficient in object-oriented design, data structures, and problem-solving with a strong foundation in distributed systems and databases. Eager to contribute to impactful projects and define tomorrow's technology.

Education

2024 – Current: Bachelor of Science in Computer Science and Computer Engineering, University of Cape Town (UCT)

- Relevant coursework: Algorithms and Data Structures, Distributed Systems, Database Design, Object-Oriented Programming, Optimization Mathematics.

2022: National Senior Certificate (Matric) Mabande Comprehensive High School, Phola, South Africa

- Distinctions in Mathematics and English.
- Achievements: Old Mutual Mathematics Olympiad participant, Highly Commended Eskom Science Expo project.

Technical Skills

- **Programming Languages**: Python, Java, C#, SQL.
- **Core Competencies**: Data Structures, Algorithms, Complexity Analysis, Object-Oriented Design, Problem Solving.
- **Distributed Systems**: Basic understanding of fault tolerance, scalability, and distributed storage.
- **Databases**: Relational Database Management Systems (SQL), Query Optimization.
- **Tools & Platforms**: AWS (basic knowledge), Git, Microsoft Office Suite (Excel, Word, PowerPoint).
- **Specialized Skills**: Mathematical Optimization, Git Version Control.

Projects

Tic-Tac-Toe Game (Java)
Developed a Java-based Tic-Tac-Toe game where players compete against an AI.
- Implemented object-oriented principles to structure game logic and ensure scalability.
- Designed algorithms for randomized and strategic computer moves.
- Integrated win condition checks for an enhanced user experience.
Repository: https://github.com/dumisxni/TicTac.git

Work experience.

Current: volunteer, Phola Academia, Phola

- Provided guidance and clarity to matriculants on how to apply for University and Bursaries.
- Helped matriculants apply at their desired universities.

February 2021 – October 2023: Mathematics and Physics tutor, Mabande Comprehensive High School, Phola

- Worked as a mathematics tutor and physics tutor assisting learners with assignments, homework, and exam preparation.

May 2023: Mathematics tutor, Simgiftyy Academic Solutions

- Worked as a mathematics tutor online assisting learners with math queries, preparing for tests and exams.

November 2024: Residence mentor and IT subcommittee

- I mentor first year students by providing guidance on how to navigate first year and how to adapt to the new environment.
- I help students with issues related to connecting their devices to the wi-fi.
- I help students with any IT queries and how to navigate to the online resources provided by the residence.

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Key Achievements

- Leadership: Led a campaign for a residence entertainment position, securing top votes.
- Problem Solving: Applied optimization mathematics in projects and competitions.
- Recognition: Highly Commended Award in Eskom Science Expo for environmental project linking academic performance to classroom color schemes.