KENNA N. GELETA

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 kngee

Pretoria, Gauteng, South Africa

OBJECTIVE

Seeking opportunities to collaborate on challenging software development projects and contribute to solving complex industry problems. Passionate about leveraging mathematical thinking and optimization techniques to build efficient, scalable systems. Eager to work in team environments where innovative solutions are developed through collaboration and where technical excellence drives impact.

EDUCATION

- **University of Pretoria [⊕]**   *Jan 2023 - Present*
  Bachelor of Engineering (BEng) - Computer Engineering   Pretoria, South Africa
  ◦ Dean's Merit List 2023 and 2024
  ◦ Distinction for all modules in Year 1 (10/10 modules) and Year 2 (12/12 modules)
  ◦ 3rd Place - Top Achievers in Computer Engineering First Year
  ◦ 2nd Place - EPE 320 Software Engineering BBD Project Competition

- **Ferdinand Postma High School**   *Jan 2018 - Dec 2022*
  National Senior Certificate (Matriculation)   Potchefstroom, South Africa
  ◦ 7/7 Subject Distinctions
  ◦ Class Rank: 1st out of approximately 95 students (2019-2022)
  ◦ Top 20 Matriculants in Dr. Kenneth Kaunda District

EXPERIENCE

- **Nano-Micro Manufacturing Facility, University of Pretoria [⊕]**   *Jul 2025 - Dec 2025*
  Intern - Printed Electronics Focus Group   Pretoria, South Africa
  ◦ Developed and debugged firmware and software for a prototype commercial gas sensor array designed for agricultural applications using Python and C
  ◦ Engineered an Electronic-Nose system to monitor and safeguard printing rooms from high levels of toxic fumes, ensuring workplace safety
  ◦ Conducted algorithm optimization for sensor data processing to improve accuracy and response time
  ◦ Collaborated with researchers to integrate hardware and software components for embedded sensor systems

- **University of Pretoria**   *Jan 2025 - Present*
  Tutor - ERS 220 Digital Systems   Pretoria, South Africa
  ◦ Assisted students in understanding digital circuit design, logic systems, and hardware description languages
  ◦ Conducted tutorial sessions helping students debug digital system implementations
  ◦ Provided guidance on course assignments and practical implementations

- **University of Pretoria**   *Jan 2025 - Present*
  Tutor - ELI 220 Linear Systems and Signals   Pretoria, South Africa
  ◦ Tutored students in signal processing, Fourier analysis, and linear system theory
  ◦ Helped students grasp mathematical concepts and their applications in engineering

- **University of Pretoria**   *Jan 2024 - Dec 2024*
  Tutor - COS 110 Object Oriented Programming   Pretoria, South Africa
  ◦ Guided first-year students in learning fundamental programming concepts using C++
  ◦ Assisted in debugging code and explaining object-oriented design principles
  ◦ Helped students develop problem-solving skills through systematic algorithmic thinking

SKILLS

- **Programming Languages:** C++, Python, C, Java, JavaScript
- **Embedded Systems & Hardware:** Firmware Development, Sensor Systems, Digital Circuit Design, Hardware Description Languages
- **Software Development:** Algorithm Optimization, Debugging, System Integration, Object-Oriented Design
- **Data Analysis & Processing:** Signal Processing, Sensor Data Analysis, Mathematical Modeling
- **Version Control:** Git, GitHub
- **Problem-Solving:** Competitive Programming, Algorithm Design, Optimization Techniques, Systematic Analysis
- **Teaching & Communication:** Tutoring, Technical Explanation, Collaborative Problem-Solving

Honors and Awards

- **International Olympiad in Informatics (IOI) - Team Member** *Aug 2022*
  International Olympiad in Informatics
  - Selected to represent South Africa at the 2022 IOI held in Indonesia
  - One of the top 4 high school programmers selected nationally
  - Demonstrated advanced algorithmic problem-solving and programming skills

- **South African Programming Olympiad (SAPO) - Provincial Winner** *2021 & 2022*
  IITPSA
  - Winner of the South African Programming Olympiad in North West Province (2021 and 2022)
  - Top 10 placement in National Round of SAPO (2021 and 2022)
  - Consistently demonstrated excellence in competitive programming

- **South African Mathematical Olympiad - Top 3** *May 2022*
  South African Mathematical Olympiad
  - Top 3 Performance in North West Province for Senior Competition
  - Demonstrated strong mathematical reasoning and problem-solving abilities

Additional Information

Languages: English (Native), Afrikaans (Intermediate)
Interests: Optimization and algorithm design, embedded systems and sensor technology, competitive programming, mathematics, test cricket, globalism

References

1. **Dr. Anna Bosman**
   Senior Lecturer, Department of Computer Science
   University of Pretoria
   Email: anna.bosman@up.ac.za
   Staff Profile

2. **Prof. Trudi Joubert**
   Professor, Department of Electrical, Electronic and Computer Engineering
   University of Pretoria
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