Ahmed Ezzat

SOFTWARE ENGINEER

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Summary

An impassioned Software Engineer with more than three years of professional experience. Well-versed in Mathematics and Applied Statistics. Highly passionate about Machine Learning, Reinforcement Learning, Computer Vision and Theoretical CS. Mentored aspiring engineers across a wide variety of CS topics and aided them to build a strong skill-set and deep understanding of the covered topics. Seeking to extend and apply my domain of knowledge to exciting problem spaces and help more people fall in love with Computer Science.

Experience

Mobile Development Lead
NABTA HEALTH LTD.

Sharjah, UAE
July 2021 - Present

- Worked on improving the app's chat-bot to be *AI-powered* for diagnosing various health conditions as well as recommending products that match the user's interests and goals.
- Worked on CI/CD scripting and app store publishing.
- Developed an *NFC temperature sensor driver SDK* for native Android using Java.
- Built a self-contained library for analyzing and predicting users' ovulation windows given their daily temperature readings.
- Developed a mechanism to give different users different roles where each corresponds to a certain set of permissions. Used Spring Security.
- Conducted the technical interviews for internship candidates as well as permanent positions.

Private Tutor
TEACHING AN INTRO TO COMPUTER SCIENCE USING PYTHON

Cairo, Egypt
June 2022 - Present

- **Course Contents:** Branching, Iteration, String Manipulation, Functions, Recursion, Debugging, OOP, Program Efficiency and others
- Developed teaching materials, such as slides, problem-sets, and recitations.
- Conducted weekly sessions on the course materials along with grading student submissions.
- Assessed students progress throughout tutoring sessions.
- Helped students better understand conceptual nuances and held problem-set discussions with students to help fill the gaps.

Software Engineer
NABTA HEALTH LTD.

Sharjah, UAE
June 2020 - July 2021

- Developed many *React Native* components corresponding to primary features.
- Developed several REST client-side web-service interfaces.
- Developed a complete *Payment System* for the Nabta App.
- Participated in *code review*
- Contributed to writing an FSM *chat-bot* for guiding users through numerous processes inside the Nabta app.

Software Engineering Intern
NABTA HEALTH LTD.

Sharjah, UAE
Mar 2020 - June 2020

- Resolved various bugs/issues in the Nabta App.
- Developed multiple *registration* features and was responsible for both the server-side & the client-side implementations.
- Contributed to integrating an *Order Management System* to ship Nabta products.

Software Engineering Intern
NAHR DEVELOPMENT

Alexandria, Egypt
June 2019 - Sep 2019

- Developed multiple components for an e-commerce mobile application using Xamarin.
- Contributed to deploying multiple projects to production.

Technical Skills

Programming Languages	Python, JavaScript, C/C++, Java, Groovy, Go, C#, SQL, Verilog
Mobile Development	React Native, Redux, Native Android, Flutter, Xamarin
Web Development	Django, Flask, Node, Express, Grails, Spring Security, Redux, React.js, Next.js, HTML5, LESS, SASS
Software & Libraries	VS Code, Android Studio, Git, Docker, UNIX, LaTeX, TensorFlow, Keras, Pandas, PyTorch

Projects

Contacts App
ANDROID ARCHITECTURE PRACTICE

Android/Java

- A simple CRUD Android Contacts App that allows you to manage your Contacts. It lets you view all the Contacts as a list, Add, Update, Delete and View the Contact Details. It was done as practice on implementing the MVC and MVVM android architectures.

Sudoku Game
PERSONAL PROJECT

Python

- A Sudoku game a solver that features a simple UI and is using the *backtracking* algorithm.

LTI System Simulator
SYSTEM ANALYSIS COURSE PROJECT

Python

- A simulator that computes and visualizes the output of a 'linear time invariant' system.
- Uses NumPy, Matplotlib and Tkinter for GUI and features advanced applied mathematics.

Collaborative Whiteboard   *Node.js, Express and React*

PERSONAL PROJECT
- A multi-user whiteboard that syncs all edits in real-time wired with web sockets.

Arithmetic Chat-bot   *C++*

PERSONAL PROJECT
- An interactive chat-bot that does arithmetic operations when prompted by the user.

Linear Systems Solver   *C++*

PERSONAL PROJECT
- A console program that solves systems of linear equations for any number of variables.
- The solving algorithm uses *Gaussian Elimination* and *Cramer's Method*.
- Implemented multi-threading to optimize solving for high number of variables.

Awards & Activities

ACADEMIC & PROFESSIONAL

2022	**Tutor**, Held sessions to teach the mobile development team members the intricacies of a library I wrote.	*Nabta Health, UAE*
2020	**Intern of the Month**, Two times in three month during my internship with the company	*Nabta Health, UAE*
2019	**1st Place**, Most efficient LTI System Simulator - System Analysis Course - Ain Shams University	*Cairo, Egypt*

EXTRACURRICULAR

2021	**4th Place**, Dell's $C(4F)_2$ Artificial Intelligence Hackathon	*Egypt*
2020	**Contestant**, ACM Egyptian Collegiate Programming Contest (ECPC)	*Alexandria, Egypt*
2020	**Finalist**, ACM ECPC Local Qualifiers (ASUCPC)	*Cairo, Egypt*
2020	**2nd Place**, Enactus's Youth Empowerment Hackathon	*Giza, Egypt*
2019	**Contestant**, ACM Egyptian Collegiate Programming Contest (ECPC)	*Alexandria, Egypt*
2019	**Finalist**, ACM ECPC Local Qualifiers (ASUCPC)	*Cairo, Egypt*
2018	**Tutor**, SefrWahed's Algorithms and Problem Solving Workshop	*Cairo, Egypt*

Education

Ain Shams University   *Cairo, Egypt*

B.SC. IN ELECTRICAL ENGINEERING   *2016 - 2021*

Languages

–• Arabic (mother tongue)   –• English (near-native)   –• German (A1-certified)