

Ryed Badr

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Education

University of Illinois Urbana-Champaign, Grainger School of Engineering	Aug 2022 – May 2026
BS in Computer Science	GPA: 3.5/4.0
<i>Selected for City Scholars program</i>	

Experience

Software Engineering Intern , ProvenAir Technologies – Chicago, IL	May 2025 – Present
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- Shipped 30+ production features across full-stack systems (**C#**, **Angular**, **PostgreSQL**), boosting analyst efficiency by 35% and delivering on client-requested functionalities
- Engineered scalable notification and file-handling systems to streamline client-analyst communication
- Refactored core services and developed advanced search, filtering, and visualization tools while achieving a 13% speedup by implementing multi-threading logic
- Gained full lifecycle experience including requirements gathering, development, testing, and deployment

Founder and Algorithm Engineer , Velocity Quant Trading Group – USA and UK	Jan 2023 – March 2025
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- Established and led a hedge fund of 8 people centered on automated, algorithmic trading models
- Developed base trading models and led quant engineers to optimize these strategies with AI
- Generated 24% ROI in one week and 80% ROI in the first year after development while managing a \$50K+ fund
- Featured in *The Chicago Journal* for developments in the quantitative trading space

Founder and Software Engineer , Badr Software Development – IL	Jan 2020 – Dec 2023
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- Created software automating 50% of administrative tasks for a recruiting firm, saving \$40,000 annually
- Deployed a web app with **Node.js**, **HTML/CSS**, and **MongoDB** predicting nightly campus hotspots, used by 4000+ UIUC students
- Built an AI app using **TensorFlow** and **Python** to detect eye diseases from user images with computer vision
- Designed a dynamic encryption algorithm for secure data transmission using **Dart**, **Flutter**, and **Python**

Research Assistant , University of Illinois, ADAPT Lab – Urbana-Champaign, IL	May 2024 – Sept 2024
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- Worked on evolvable compiler construction with ML and formal methods in **x86 Assembly** and **C**
- Responsible for investigating effectiveness of a Gemini-based environment to optimize compiler evolution

Research Assistant , University of Illinois, Dept. of CS – Urbana-Champaign, IL	June 2023 – Sept 2023
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- Collaborated with Dr. Darko Marinov to translate Apache Commons from **Java** to **Python**
- Implemented a unique approach to retain unit tests in **Java**, enhancing accuracy in testing translated code by leveraging **GraalVM** to seamlessly combine **Java** and **Python**
- Explored AI-driven methods for code translation and automatic updates when **Java** files are modified
- Co-Author of GlueTest: Testing Code Translation via Language Interoperability (published in *IEEE 2024*)

Freelance Software Developer , Self-Employed – Chicagoland Area, IL	May 2020 – Aug 2022
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- Pitched and crafted customized software-based solutions for local businesses
- Produced multiple inventory management systems with features to forecast future supply and demand
- Deployed software to manage students of a tutoring business, and automated mundane tutor tasks

Software Programming Instructor , Code Ninjas – Naperville, IL	May 2020 – Aug 2022
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Extracurricular Activities

Quantitative Trading Club , University of Illinois – Urbana-Champaign, IL	Aug 2022 – May 2023
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- Designed, implemented, and evaluated Python-based trading models
- Winner of several investing competitions where stock market is simulated

Technical Skills

C/C++ , Python, Java, SQL, C#, Node.js, Angular, MongoDB, Git, JavaScript, HTML, CSS, Assembly