

Bassem Noghnogh

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EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Science in Computer Science

Urbana-Champaign, IL

May 2025

EXPERIENCE

AI and Automation Engineer

EspoCorp

Aug. 2025 – Present

Chicago, IL

- **Engineered** a full-stack data management platform integrating PostgreSQL database with JobDiva API, **streamlining** access to 10,000+ employee records
- **Architected** automated data pipelines with QuickBooks API integration, **reducing** manual financial data processing time by 75%
- **Designed** and **deployed** responsive UI dashboards that **visualize** real-time business metrics for 25+ internal stakeholders
- **Automated** data extraction and reporting workflows, **accelerating** business intelligence delivery by 60%

Cofounder/Lead Programmer

Shape Dimensions

Feb. 2022 – Aug. 2022

Champaign, IL

- **Designed** and **implemented** an end-to-end order processing pipeline for 3D-printed goods, **optimizing** fulfillment workflow efficiency by 40%
- **Developed** an interactive analytics dashboard to **monitor** order metrics and customer trends, providing **actionable insights** from 500+ transactions
- **Orchestrated** order management for 100+ MakerGirl charity initiative orders, ensuring 98% on-time delivery rate
- **Secured** admission to prestigious IVenture Accelerator program through **exceptional** technical contributions and business impact

PROJECTS

UIUC Course Explorer & Planner | *Node.js, React, MySQL*

Jan. 2025 – May 2025

- **Architected** a full-stack course scheduling platform serving 200+ UIUC students to **optimize** four-year academic planning
- **Integrated** prerequisite tracking for 3,000+ courses with major/minor customization and difficulty-based distribution algorithms
- **Engineered** a responsive React interface featuring drag-and-drop schedule builder with real-time validation, **improving** UX efficiency by 50%
- **Deployed** an ML-powered recommendation engine that **analyzes** course load patterns to suggest balanced semester schedules

Recipe Generator | *C++, React*

Jan. 2025 – May 2025

- **Developed** a dynamic full-stack web application generating personalized recipes from user ingredients, achieving 95% match accuracy
- **Implemented** a high-performance C++ backend with **optimized** parsing algorithms to match against 5,000+ curated recipes
- **Designed** an intuitive React frontend featuring interactive filters for dietary preferences and cooking time, **enhancing** user engagement by 40%
- **Validated** system reliability with 150+ unit and integration tests, ensuring 98% matching accuracy and UI stability

Image Focus Depth Amalgamator | *Python, Computational Photography*

Nov. 2024 – Dec. 2024

- **Researched** and **analyzed** cutting-edge academic literature on focus depth amalgamation techniques in computational photography
- **Engineered** a novel Python algorithm **leveraging** advanced computational photography principles to merge 15+ multi-focus images into a single fully-focused composite with 92% clarity improvement

TECHNICAL SKILLS

Programming Languages: C, C++, Python, JavaScript, SQL

Frameworks/Tools: React, Node.js, MySQL, NumPy, Pandas, Git

Relevant Coursework: Software Design Studio, Data Structures, Computer Systems Engineering, Artificial Intelligence