RACHEL JIARUI CHEN

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EDUCATION

Northeastern University, **Khoury College of Computer Sciences,** Boston, MA
B.S. Computer Science and Philosophy with Minor in Mathematics. GPA: 3.89/4.0.

TECHNICAL SKILLS

Language & Frameworks | Python, Java, JUnit, C++, C, HTML, CSS, JavaScript, TypeScript, React, Next.js, Node.js, Express.js, Bootstrap, Tailwind, Material UI, SQL, GraphQL, PyTorch, Assembly, Lean, DrRacket, Verifpal
Services & Tools | Google Cloud Platform, Firebase, Git, LaTex, Salesforce, DatoCMS, Unix, JIRA, Figma

WORK EXPERIENCE

VP of Operations & Finance | Northeastern University   Dec 2023 – *Present*
Notion API, Integromat, Notion Databases, Excel, Management, Leadership
- Standardizing processes for budget, room booking and marketing requests from VPs by linking database views
- Designing Integromat automations to connect Google Forms to Notion Databases to handle 300+ applicant info

Undergraduate Research Assistant | Northeastern University   May 2023 – *Present*
Python, ChatGPT API, Research & Development
- Proposing an environment for integrated human-AI optimized Python programming leveraging ChatGPT API
- Enhanced query-response accuracy by a system of classes and decorators which appends specs and tests to query
- Assessing synth viability and accuracy by developing 5+ code designs of varying complexities in environment

Technical Project Manager, Software Instructor | TAMID Consulting   Feb 2023 – Dec 2023
HTML/CSS/JS, React, Tailwind, RESTful APIs, GitHub Enterprise, Vercel, Google Presentation, Management
- Led and managed a team of 4 developers on web app deliverable for Invictus, an Israeli cybersecurity start-up
- Educating 20+ students on full stack development and end-to-end product delivery as future Software Consultants
- Coordinating recruitment events, decision protocols and interviews to narrow down 300+ prospective applicants

Software Engineer Intern | Ampion, PBC   May 2023 – Aug 2023
Scrum/Agile, React, Materials UI, Next.js, SQL, Salesforce, Git, Google Cloud Platform, GraphQL, JIRA, DatoCMS
- Implemented wireframes of new modern website navigation bar and configured 8+ URLs based on SEO practices
- Presented 7-sheet data metrics report on the efficacy of third-party agencies, querying information from databases across Salesforce and Google Cloud Platform as well as Google Analytics using SQL and Excel Sheets
- Streamlined CI/CD pipeline of evidence querying and storage by automating creation and retrieval of government evidence in content management system using a DatoCMS API plugin to compute fields based on other fields

Research Candidate | MIT PRIMES (MIT CSAIL Group)   Jan 2021 – Jul 2022
C, Assembly, RISC-V, VerifPal, LaTex, Computer Security, Cryptography, Blockchain, Side-Channels
- Invented stronger notion of digital ownership through establishing virtual objects on secure hardware (RISC-V)
- Identified security side-channels and specified 3 security mechanisms to patch vulnerabilities using VerifPal
- Co-authored on final 15-page research paper, presenting work at PRIMES Conference and MIT CSAIL Group

PROJECTS

Markov Chains Music Generation | Personal Project   Nov 2023 – *Present*
Python, Pandas, NumPy, SciPy, MatPlotLib, Linear Algebra
- Leveraging Markov Chains to build a music generation model that builds the most likely chorus from a note
- Analyzing MIDI music files from classical music and creating data analysis graphs to represent data pool

Personalized Speech Identification and Generation | Samsung Electronics   Nov 2022 – May 2023
PyTorch, Keras, TensorFlow, Librosa, Google CoLab
- Performed rigorous bi-weekly ML/AI exercises on Google CoLab to practice fundamentals of ML development
- Achieved 83% speech identification accuracy using a KNN model and through researching zero-shot generation

RELATED EXPERIENCES

Multivariable Calculus Teacher Assistant | Northeastern University Graded weekly quizzes for over 60 students