Grace Zhang

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Education

Bachelor of Applied Science, Electrical and Computer Engineering + PEY Co-op
University of Toronto, Toronto, ON

- **3rd Year**: Entering 3rd year of studies with a focus on software engineering and robotics.
- **Relevant Courses**: Digital Systems (Verilog), Computer Organization (Multisim, Assembly), Programming Fundamentals (C++), Applied Fundamentals of Deep Learning (Python, Machine Learning), Algorithms and Data Structures (C++, Python), Operating Systems (C, C++)

Skills

Programming Languages: Python, JavaScript, C++, C, SQL, Assembly, Verilog, HTML, CSS, LaTex

Technologies: Play, React, Next.js, Rhino7, Fusion360, Altium, Multisim, BeautifulSoup, 'nltk'

Professional Skills: Project Management, Data Analysis, Technical Writing, Team Collaboration, Stakeholder Management, Leadership

Microsoft Suite Skills: Excel, PowerPoint, Word, Outlook

Other Skills: CAD Design, 3D Modeling, Marketing Automation, Digital Marketing, Graphic Design, Web Scraping, Natural Language Processing (NLP)

Work Experience

Software Engineering Intern
Picovoice, Toronto, ON *May 2024 - Present*

- **User Experience Tracking**: Design and implement user experience tracking systems using Google BigQuery, crafting complex SQL queries to analyze user data using SQL and Python.
- **Dashboard Development**: Develop and maintain interactive dashboards on Google Data Studio to visualize key metrics, incorporating data analysis and technical writing skills.
- **Developer Training**: Create in-depth tutorials and conduct training sessions to teach developers how to effectively use our APIs and SDKs across various platforms including Python, Java, Node.js, Vue, Django, Next.js, and React.
- **Codebase Maintenance**: Perform rigorous testing and maintenance of existing codebases, including Python scripts, Java modules, Node.js services, and front-end frameworks, to ensure functionality and performance, utilizing project management skills.
- **Developed AI-Focused Financial News Scraper**: Built a Python-based web scraper using 'newspaper', 'requests', 'BeautifulSoup', and 'nltk' to aggregate and analyze financial news articles. The tool parsed content from RSS feeds, identified AI-related mentions, and correlated them with specific companies using NLP, providing insights into AI trends in financial markets.

Mechatronics Engineering Intern
Ergonic, Toronto, ON *Aug 2023 - Mar 2024*

- **Mechatronic System Design**: Collaborate on mechatronic system designs, improving product efficiency through enhanced design techniques and advanced simulations, leveraging C++ and Verilog.
- **3D Modeling**: Utilize CAD software (Rhino7, Fusion360) for precise 3D modeling and technical drawings to support web development and mechanical designs.
- **Electronic Circuit Development**: Assist in the development of electronic circuits, enhancing system reliability and performance through meticulous testing and optimization, applying knowledge in Assembly and C.
- **Marketing and Web Design**: Support marketing and web design initiatives, contributing to increased sales through improved user interfaces and effective online presence, incorporating skills in HTML and JavaScript.

Extra/Co-Curricular

CUBEC Director

Club for Undergraduate Biomedical Engineering, Toronto, ON *July 2024 - Present*

- **Conference Leadership**: Lead the University of Toronto portion of the Canadian Undergraduate Biomedical Engineering Conference (CUBEC), overseeing all aspects of finance, marketing, and event planning, applying project management skills.
- **Technical Conference Planning**: Coordinate with various departments to ensure the technical requirements for the conference are met, including AV setup, software requirements, and technical support
- **Stakeholder Management**: Manage relationships with stakeholders, including sponsors, speakers, and attendees, ensuring clear communication and satisfaction, using team collaboration and data analysis skills.
- **Budget Oversight**: Develop and manage the conference budget, tracking expenses and ensuring cost-effective operations while maximizing impact, employing Excel and other Microsoft Suite skills.

Business Lead

aUToronto, Toronto, ON *March 2024 - Present*

- **Sponsor Engagement**: Lead and strengthen sponsor connections to increase engagement and profits, utilizing data analytics to identify potential sponsors and track engagement metrics, employing project management and data analysis skills.
- **Event Coordination**: Oversee and coordinate the execution of speaker series, professional blog updates, and team events, ensuring seamless operations through detailed project management techniques.
- **Networking Strategy**: Lead a team to establish and strengthen networking connections with industry professionals, faculty, and students, using CRM tools to manage and track relationships.
- **Sponsorship Development**: Develop strategies for expanding sponsorship opportunities and enhancing team visibility, implementing marketing automation tools to streamline outreach processes.

Marketing Lead

Club for Undergraduate Biomedical Engineering, Toronto, ON *September 2023 - July 2024*

- **Marketing Strategy**: Devise and execute marketing strategies, promoting the club and boosting engagement through data-driven campaigns and social media outreach, using project management and data analysis skills.
- **Networking**: Establish networking connections with industry professionals, faculty, and students, using digital marketing tools to track and optimize interactions.
- **Content Creation**: Create visually compelling content to enhance the club's brand image, utilizing graphic design software and content management systems, including Play and React.
- **Team Leadership**: Supervise a team of junior marketers, showcasing strong leadership skills and ensuring high-quality output through mentoring and performance tracking, applying team collaboration and technical writing skills.

Team Member

aUToronto, Toronto, ON *September 2023 - March 2024*

- **Project Contributions**: Contributed to various projects and initiatives, showcasing strong analytical and problem-solving skills, and utilizing skills in Python and C++.
- **Team Collaboration**: Worked collaboratively with team members to achieve project goals and milestones, leveraging team collaboration and technical writing skills.

Projects

Heartbeat Audio Monitor

- **Deep Learning Model Development**: Developed a deep learning model to classify heartbeat sounds as normal or abnormal. Preprocessed audio files into waveform images and used data augmentation techniques. Implemented a model with convolutional and fully connected layers, using Python.

Local Oscillator and User/Computer Interface

- **Signal Generation**: Designed a local oscillator and user/computer interface for a flexible radio transceiver using the DE1-SoC board utilising Altium. Generated quadrature signals for RF mixers and controlled the TX/RX switch, leveraging C and Verilog.

3D Renderer

- **3D Rendering**: Created a 3D renderer using Verilog on the DE1-SoC board with VGA display. Implemented Bresenham's algorithm for line rendering and used linear algebra for 3D transformations, incorporating C++ and Assembly.