David Wong

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EDUCATION

Northwestern University, *Evanston, IL* **June 2027**

BS, Computer Science & Biomedical Engineering (GPA: 3.6 / 4.0)

- ***Coursework*:** Biomedical Machine Learning, Deep Learning for Medical Imaging, Tissue Engineering, Molecular and Cellular Lab, Inorganic and Organic Chemistry, Data Structures & Algorithms, Engineering Analysis, Intro. Materials Science, Molecular and Cell Biology, Experimental Design, Biostatistics, Physics, Thermodynamics.
- ***Leadership:*** Project Manager and Treasurer (Medical Makers), Vice President (Leukemia and Lymphoma Society), Focus Leader (Asian American Intervarsity), Philanthropy Chair (Sigma Alpha Epsilon)

SKILLS

- Tools and Platforms: AutoCAD, SolidWorks, Git, Jenkins, JMP, Microsoft Office, Visual Studio, Raspberry Pi, Arduino.
- Programming Languages: Python, C/C++, .NET, SQL, Typescript, Javascript, MatLab, Racket.
- Python Libraries: NumPy, Pandas, Scikit-Learn, Matplotlib, Seaborn, PyTorch, Tensorflow, Keras, NiBabel, SimpleITK, PyMongo, SQLAlchemy, PyTest, OpenCV
- Soft Skills: Technical Writing, Communication, Teamwork, Critical Thinking, Attention to Detail, Problem Solving.

WORK EXPERIENCE

Regeneron Pharmaceuticals **June 2025 – Present**

Data Engineering Co-op *Tarrytown, NY*

- Implemented interface for the laboratory information management system to be used by researchers and scientists
- Designed data handling, management, and analysis pipelines to connect scientists, researchers, and project managers to automate repetitive, manual work and improve experiment tracking
- Planned and developed new custom platforms through communication with scientists and project managers to ease transition from legacy proprietary platforms and add new features

Dr. Ulas Bagci's Machine and Hybrid Intelligence Lab **March 2024 – Present**

Research Intern *Chicago, IL*

- Configured Stable Diffusion 1.5 fine-tunes with HuggingFace Diffusers library for the generation of Chest x-ray images.
- Organized the largest eye tracking study to date, involving 16 radiologists diagnosing Chest x-rays, leading to novel insights of radiologists' analyzing processes
- Performed statistical analysis, distilling eye gaze patterns and reports into actionable and understandable metrics.
- Publish first author papers in the CVPRW proceedings and ETRA proceedings

360Factor Oasis-LMS **June 2022 – Sept. 2023**

Junior Software Developer Intern *Chicago, IL*

- Generated closed captions for 20,000+ hours of educational videos using OpenAI API.
- Developed a chatbot utilizing Retrieval-Augmented Generation (RAG) to ground answers to medical questions on vetted dataset.
- Optimized RAG process via iteration to improve chatbot performance by 50%.

PROJECTS

- **Sanofi Design Innovation Challenge** **May 2025 – Present**
  A large-volume, on-body delivery system to deliver medicine subcutaneously as an alternative to IV infusions which improves the mobility of patients and allows for at-home treatment administration. The design and development of this system is built upon market analysis and patient feedback while avoiding patent infringement.
- **Mechanical Independent Liaison Operator (MILO)** **November 2023 – Present**
  A robotic arm that responds to a user's voice commands to assist patients with limited upper limb strength to do daily tasks, such as connect with family via video calling & drink water. I built voice recognition and face tracking system, optimizing the system for lower costs, responsiveness, and ease of use.

AWARDS

- **TOM Global Innovation Challenge Honorable Mention 2025**
  An annual competition to engineer assistive technologies for a wide variety of users. Of 140 participating teams, we placed in the top 8.
- **RESNA Student Design Challenge Finalist 2024**
  Annual competition that showcases creative and innovative assistive technology designs that help people with disabilities function more independently.