|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Develop firmware, such as bootloader, Linux kernel and device drivers. Bring up Linux and drivers on new hardware. Develop C++ middleware applications Develop test plans and procedures based on functional requirements and industry standards. Design automated test suites for sensors and embedded systems. Perform functional tests for sensors and embedded systems. Supporting other teams for how to task the cameras, and integrate the software API BA/BS/MS/PhD in computer science, computer engineering or related discipline. High level of proficiency with C/C++ programming for Embedded Linux platforms. 3+ years of embedded software development experience which must include direct, hands-on experience of full embedded software development cycle, including design, prototype, development, code review, test, build and release. Experience developing bootloader, Linux and/or device drivers. Experience with common hardware interfaces, such as GPIO, I2C, SPI, MIPI-CSI, Ethernet. Familiar with electronic schematics and test equipment (such as signal analyzers, oscilloscopes etc.) Working knowledge of Linux-based developer** | | **Andy (Xiangyu) Cui** | | | **tools and debugging environments. Able to bring up new PCBs, troubleshoot and debug firmware. Demonstrable skills in designing and developing modular, maintainable and scalable software. Experience with code review, able to discuss the design choices and address feedback Ability to deal with ambiguity, work with the team to gather and clarify requirements. Ability to work independently with little guidance. High level of attention to details. Desire to work in a fast-paced environment YOTCO build Linux, Device Drivers, board bring-up, for camera driver development NVIDIA chips & products Using NVIDIA as an edge computer device Skilled in working in an embedded Linux environment Must have experience writing Linux device drivers (XPRS) Board bring-up for newly designed / re-designed boards Familiarity with AGX/NX product lines Familiarity with ISP** | |
| [GitHub](Github) | [LinkedIn](https://www.linkedin.com/in/andyfcui/) | [Portfolio](http://dreamslink.me/) | | |
| [xiangyucui@outlook.com](mailto:xiangyucui@outlook.com) | (402)-853-3000 | | |
| **EDUCATION** | | **Relevant Coursework** | **Location & Date** | |
| **Northeastern University**  *M.S. in**Artificial Intelligence of Khoury College* | | [Open folder outline](https://dreamslink.me/#resume) | Boston, MA, USA  Sept. 2021-Dec.2023 | |
| **University of Nebraska-Lincoln**  *B.S. in Computer Science of Arts Science College* | | [Open folder outline](https://dreamslink.me/#resume) | Lincoln, NE, USA  Sept. 2016-May. 2020 | |
| **Dalian Neusoft University of Information**  *B.S. in Electronic Information Engineering* | | [Open folder outline](https://dreamslink.me/#resume) | Dalian, LN, CHN  Sept. 2013-Sept. 2015 | |
| **SKILLS** | | | | |
| * Programing languages: Java, Python, JavaScript, HTML, CSS, C/C++, Assembly, VB * Database: MySQL, PostgreSQL, MongoDB, Redis, SQLite, Hive * Machine Learning: TF-IDF, Naïve Bayes, GPT-2, Bert, CNN, Transformer * Framework/Libraries: Spring Boot, React.js, Node.js, jQuery * Version Control & CI/CD: GitHub, TFS, Azure DevOps, Jenkins, Jira * Others: AWS, Docker, Maven, Tomcat, Axure, Servlet, Junit, Nginx, LaTeX, CAD design, Tableau | | | | |
| **WORK EXPERENCE** | | | | |
| **AlpaLifeBio Inc | Internship**  *Software Engineer* | | | Woburn, MA, USA  Dec. 2022- June 2023 | |
| * Executed data collection from biomedical public databases using **Python** and **graphical web scraping tools**, enhancing the dataset for advanced analysis. Additionally, processed and analyzed over 500,000 data entries daily, utilizing graphical data representations to streamline reporting and significantly boost workflow efficiency. * Applied **TF-IDF** techniques for data comparison and matching, effectively identifying potential clients with a match rate of up to 95%, significantly contributing to targeted marketing strategies. * Consolidated existing datasets for integrated analysis and established a structured **SQL** database, implementing tag processing for improved search and retrieval operations. This approach has saved 80% of the time for future data searches and significantly enhanced work efficiency, thereby saving costs for the company. | | | | |
| **PROJECT EXPERIENCE** | | | | |
| [**Amazon QA robot trained by BERT & GPT-2**](https://github.com/AndyFCui/Amazon_QA_Robot/tree/main) **(NLP)**  *Team Leader & Development Designer* | | | Boston, MA, USA  Sept. 2023-Dev. 2023 | |
| * Developed a Question Answering (QA) system using **GPT-2** and **BERT** models focused on Amazon product reviews, assessing their performance in natural language processing tasks. * Applied advanced **NLP** techniques, including **TF-IDF** Vectorization, **CBOW**, and **Skip-gram**, for effective data preprocessing and analysis. * Conducted **K-Fold** Cross-Validation and ablation studies to optimize model performance and robustness, utilizing comprehensive model training and fine-tuning with a Kaggle dataset. We focused on accuracy, **LOSS**, and **BLEU** score metrics for evaluation, ultimately achieving high precision with an Accuracy F1 score of up to 94%. | | | | |
| [**Employment Website Design by Axure**](https://github.com/AndyFCui/HCI_Design_Job_website) **(HCI)**  *Development Designer* | | | Boston, MA, USA  Sept. 2023-Dev. 2023 | |
| * Orchestrated the design of an Employment Website tailored for co-op opportunities, meticulously realized through the principles of **Human-Computer Interaction** (HCI) and ensuring an intuitive user experience that aligns with non-technical user habits for widespread acceptance. * Applied **CRAP design** principles to create a visually cohesive and navigable interface, addressing existing website pain points by incorporating critical features such as visa type and field of work. * Championed a cohesive UI design philosophy across the platform, securing a seamless and inclusive user experience that appeals to a diverse audience. The design's efficacy and user satisfaction were substantiated through extensive usability testing, confirming that the interface meets high standards of effectiveness and user gratification. | | | | |
| [**Robot Shop Database**](https://github.com/AndyFCui/OnlineShop-Database) **(SQL)**  *Team Leader & Development Designer* | | | Boston, MA, USA  Jan. 2023-May. 2023 | |
| * Developed a **Python** and **MySQL**-based Robot Store Management System to streamline operations for small supermarkets, featured in a terminal user interface. * Implemented SQL database structures and **Python-MySQL** connections, enabling efficient user account, order, and refund management. * Constructed and documented a secure, offline management system, accommodating customer and operator interactions with potential for web expansion using **Django**. * Managed project version control with Anaconda and maintained code repository on **GitHub**, with comprehensive end-user documentation and test cases. | | | | |