SHAOYANG STASSEN

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EDUCATION

Cornell University, College of Engineering | GPA: 3.89 **Ithaca, NY**
B.S. Computer Science, Minors: Electrical & Computer Engineering, Business **Aug 2022 - May 2026**
Relevant Coursework: Computer Systems, Systems Programming, Analysis of Algorithms, Data Structures, Robotics, Computer Vision, Robot Learning, Large-scale Machine Learning, Functional Programming, Computer Networks

EXPERIENCE

Software Engineer Intern | *Travelers Insurance Company* | *Hartford, CT* **May 2024 - Aug 2024**

- Built a production serverless ingestion processing millions of Kafka records/day using AWS Lambda + Firehose
- Designed API-driven microservice workflow replacing Kubernetes-managed services, reducing operational overhead
- Implemented observability and on-call-friendly dashboards/alerts, added validation, retries, and error handling
- Performed cost/performance tradeoff analysis, achieving ∼20% cost reduction and saving 8+ engineer-hours per release

Robotics Researcher | *EmPRISE Lab, Cornell University* **Oct 2024 - Present**

- Built scalable Python pipeline automating data ingestion and training for VLM fine-tuning across 18 caregiving tasks
- Engineered data integration aligning video, simulation, language, and haptic into common embedding for task planning
- Developed labeling tooling/workflows, reducing annotation time by ∼30% and improving dataset quality/consistency

Software Engineer | *Combat Robotics@Cornell* **Sep 2022 - Present**

- Developed real-time perception components (CNN-based recognition + tracking) with >90% task success
- Built simulation-driven autonomy experiments to iterate on strategy and opponent trajectory prediction
- Automated ML training and evaluation pipelines, significantly accelerating iteration cycles under a tight deadline
- Collaborated with 10+ engineers in Agile sprints (planning, code reviews, documentation) throughout our timeline

Computer Vision Teaching Assistant | *Cornell University, College of Engineering* **Jan 2025 - May 2025**

- Co-designed a Vision-Language project using CLIP and authored starter code/tests to reinforce core CV concepts
- Mentored students in debugging during office hours on computer vision assignments

PROJECTS

AWS Slack Task Reminder | *Combat Robotics@Cornell* **Aug 2024 - Dec 2024**

- Built an event-driven reminder system using Slack API, supporting 50+ users with scheduled workflows
- Implemented per-user targeting, reducing manual follow-ups and saving 20+ hours/semester for team leads
- Added custom features (flexible scheduling, retry logic, logging/metrics) for ease of debugging and broad usage

Specialized LLM Agent (RAG) | *Combat Robotics@Cornell* **Dec 2024 - Jul 2025**

- Built RAG chatbot for team documentation using embeddings + vector search for structured Q&A and explanations
- Implemented document chunking, retrieval scoring, and evaluation prompts to improve answer grounding
- Optimized ingestion pipeline for incremental updates and low-latency retrieval for interactive use

Robo Dog (Embedded Systems) | *Independent* **Jan 2025 - May 2025**

- Designed a quadruped robot with multi-actuator control; implemented PID loops and pose logic on a Pico W in C
- Built TCP web server for remote control/telemetry, integrated PWM motor/servo control, ultrasonic sensing
- Delivered end-to-end prototype including soldered electronics, software and firmware: project link

SKILLS

Languages: Python, C++, C, Java, SQL, JavaScript/TypeScript, C#, OCaml, HTML, CSS
Software: OOP, data structures/algorithms, Linux, REST APIs, testing, CI/CD, Git
Cloud/DevOps: AWS (Lambda, API Gateway, S3, DynamoDB, EventBridge, Firehose, CloudWatch, IAM), Kafka, Docker, Kubernetes, Terraform, Jenkins
ML/CV: PyTorch, TensorFlow, OpenCV, multimodal pipelines, evaluation metrics, data labeling workflows
Achievements: Dean's List @ Cornell (x6), Eagle Scout, Black Belt in Taekwondo, Meinig Family Leadership Scholar