SOFTWARE ENGINEER

SUMMARY

I am a full-stack developer with excellent communication and coordination skills and a passion for design.

EXPERIENCE

Software Engineer 08/2014 to Current The Nielsen Company

Founding member of the Innovation Lab. Led the team's design and development of products for Unmanned Aerial Vehicles (UAVs) and virtual reality (VR).

Skills: Java, python, caffe, CNN training, embedded software, MAVProxy, ArduPlane, project management

UAVs - Software Engineer & Operations Specialist

Developed sensing payloads for fixed-wing UAVs enabling smarter autonomous control. Trained a neural network to process photos during flight and recognize targets of interest; wrote software to adjust flight plan accordingly. This capability will be used by conservation groups across Eastern Africa.

Built a Hardware-in-the-loop simulation; rapidly tested flight logic and sensor integration on real hardware without risk of damaging aircraft. Profiled on-board software and identified bottlenecks, increasing FPS by 100%.

Designed REST API and geospatial database to support a UAV control app.

Established holistic view of the project by collaborating with domain experts; created project roadmap with buy-in from team and stakeholders.

Created detailed mission plans and reports to ensure efficient mission execution. Researched and complied with UAV regulations.

VR - Project Engineer & Visionary

Managed a VR project with a budget of over $500,000. Sorted out project dependencies, identified and mitigated risks, and ensured key deadlines were met.

Brainstormed immersive and interactive features, and solicited feedback from potential customers; led the design and prototype of requested features.

Researched competitive landscape and provided VR expertise to establish our focus.

Other Projects

Coordinated the configuration and shipment of over 6,000 smartphones to aid the UN during the 2014 Ebola outbreak in West Africa. Created REST API, databases, and AWS infrastructure to support the reporting software installed on the phones.

Rapidly prototyped products with a User-centered design (UCD) approach; proposed new business and product ideas.

Wrote and deployed python-backed twitter bot to connect users with questions to relevant domain experts.

Software Developer 08/2011 to 08/2014 Maxar Technologies Ltd

Founding member of the platform team. Designed, implemented, and supported the back-end infrastructure for Saga, our flagship lifelogging app with over 10,000 active users on Android and iOS.

Skills: Java, node.js, PostgreSQL, Storm, Kafka, Zookeeper, Tomcat, Spring, AWS

Saga - Software Developer

Wrote Java services deployed to apache tomcat. Designed and implemented REST API interfaces. Designed and optimized postgres and elasticsearch databases and DAOs.

Led the development of a real-time rules-based notification infrastructure, using storm, kafka, and cassandra for high-throughput processing and storage.

Led daily and weekly scrum meetings.

Coordinated weekly releases and deploys to production. Spun up and managed AWS instances. Set up service and database monitors; responded to pages and ensured 24-hour uptime.

Led the design of user-facing features like charts and infographics.

Lifestream API - Software Developer

Co-developed our customer-facing lifelogging API. Built services using node.js, java, storm, and cassandra that would scale to 1 million users. Designed and implemented intuitive REST APIs.

Traveled to Seoul to rapidly iterate on solutions with our partner, LG. Designed features for and managed the relationship with another partner, IFTTT.

Trained and managed new developers.

Research Assistant 06/2010 to 07/2011 Talaris Therapeutics Inc.

Skills: Java, python, Arduino, circuit design, soldering, machining

Built Lullaby, a system for tracking environmental factors that disturb sleep.

Synchronized and logged inputs from sensors including audio, video, motion, and air quality. Researched and experimented with methods of remotely determining heart rate; soldered infrared LED circuits to detect oxygenated hemoglobin.

â€œLullaby: A Capture & Access System for Understanding the Sleep Environmentâ€, UbiComp 2012 (Winner: Best Paper Award).

Junior Test and Production Engineer 07/2008 to 04/2010 Gridpoint

Skills: C, embedded software, assembly, soldering

Assembled, soldered, and tested smart-charging, data-logging units for Plug-in Hybrid Electric Vehicles. Wrote C code to maximize GPS satellite lock and automate testing.

OTHER PROFESSIONAL EXPERIENCE
Founder and Designer 05/2015 to Current Company Name

Lead highly-motivated 5-person team that designs and runs live-action board game events for over 50 simultaneous players.

Discovered and booked venue, promoted the event, and sold all 54 tickets in one day. Ordered and assembled materials, managed the budget, and trained volunteers. Coordinated and resolved pain points for players and volunteers to ensure the game ran smoothly.

Collated player feedback from questionnaires and player-created blogs and podcasts. Selected priorities for feature and operational work; designed and playtested new features.

Spoke on a panel on Megagame design at PAX Prime 2015. Ran a game that raised over$2,000 for Child's Play Charity.

EDUCATION
B.A : Computer Engineering 2011 University of Washington
TECHNICAL SKILLS

Expert: Java, PostgreSQL, UNIX

Proficient: python, javascript, node.js, C#, C++, C

Other tools and frameworks: Tomcat, Spring, Memcached, JProfiler, JUnit, PostGIS, Elasticsearch, Cassandra, Storm, Kafka, Zookeeper, caffe, CNN training, MAVLink, MAVProxy, ArduPlane, Mission Planner, JSBSim, Git, SVN, Maven, Gradle, Play!, npm, AWS (EC2, S3, CloudWatch, DynamoDB, IAM, RDS, Route 53, VPC, Elastic Beanstalk, SNS), Chef, GCM, APNS