Andrew Novac

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Recently graduated software developer, returning to work at Cast after a 16-month internship. Having worked on various programs, experienced in a number of languages and frameworks. Always picking up the latest technologies to stay up to date, coding open source projects on GitHub.

Education

University of Toronto   Sept. 2014 to Dec. 2019
● Honors Bachelors of Science: Computer Science Specialist | Mathematics Major
● Coursework in: Artificial Intelligences; Machine Learning; Neural Networks; Software Development; Operating Systems; Databases; Algorithms; Applications of Computer Science; Computer Architecture; Programming organization; Web Programming; Mathematical Modelling; Robotics

Employment

BlackTrax - Cast Soft   Jan. 2020 to Current
Software Developer
· Tracking user movement in real life down to the millimeter, integrated our real-time tracking protocol with unreal engine to parse data from infrared beacons, implementing all functionality provided by RTTrP exposed through blueprints for user scaling and optimization
· Decreased smoothing latency BlackTrax reading by 20% through FIFO discarding of data and the implementation of a switch style system to optimize delivery of packet info, as well as taking advantage of in-engine interpolation instead of velocity and acceleration measurements
· Took on revitalization project of the customer outreach system by migrating to ZenDesk and implementing natural language processing to decrease user time spent, response time of marketing and sales, and number of tickets opened

                                                         May 2018 to Aug. 2019
Research Developer Intern
· Restricted Resource.h content IDs by 90%, then set up a greedy algorithm to go through viable program paths and log actions taken by identifying changes through OpenCV and numpy, populating a colored tree according to nodes visited and completed
· Using a RasPi and a USB hub, allowed on-site representatives to always have the latest images and documentation in a set of SSDs - ready and constantly updating though a local TCP exchange, reducing delays in our technician outreach program
· Tracked user information using Revulytics and logged information onto a csv file, implementing a complete user analytics system

Liminal Entertainment Technologies   Summer 2020
Consultant - Developer
· Encapsulated data of video, audio, motion, and more for end-to-end encrypted communication across public networks with delays under 30ms
· Created a cross platform GUI using AvaloniaUI and .NET framework, transforming a Windows native application to OS X for mid-pandemic release

Projects

Melodify
A fully fledged windows application using the Spotify API, replacing the native client with a native Windows app providing user analytics and stats

Cover Hack
Reactive webapp that uses a markdown style system to dynamically customize a cover page using fully integrated controls according to preference

Robotic Motions
Using a real or simulated 7-R robotic arm, transcribed end-effector position for route planning and obstacle avoidance in a dynamic environment

Facial Recognition
Using machine learning methods, linear regression, gradient descent, created a visual UI that follows faces in videos to compare performance

Emergency Response Aid
Android application that sends user health and location information to contact emergency services, using OAuth and API Medic for user privacy

Technologies

C · C# · Go · C++ · Java · React · Python · MongoDB · JavaScript · and more...

Experiences

Version Control · International Baccalaureate · Agile Ceremonies · Volunteer Note-taker