DAN DANIEL
Software Engineer

CONTACT INFORMATION

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PROFESSIONAL SKILLS

C#, ASP .NET, MVC, Entity Framework, WCF
Identity Framework, Linq, SignalR, IIS, AD

Java (J2EE, J2SE), Hibernate, JSP,
Oracle GlassFish Server

Android Application & IME Development
(API 16+)

JavaScript, AJAX, JQuery, HTML5, Bootstrap

TFS, TFVC, Git, Subversion

MySQL, MSSQL, Oracle DB

PROFESSIONAL INTERESTS

Object-Oriented Design
Programming Languages, Modelling

Industrial Software Systems

Software Quality, Software Reuse

Android Application and Framework
Development

LANGUAGES

ENGLISH
★★★★

HUNGARIAN
★★★★★

ROMANIAN
★★★★

WORK EXPERIENCE

SOFTWARE ENGINEER - SYSTEM SPECIALIST

ST Electronics, Singapore   Feb 2014-Current

Responsibilities: Building a framework based on VCL *(Variant Configuration Language, own developed generative programming language)* that reduces development time and effort by simplifying the way the company builds, reuses and configures software systems. The framework features persistence layer implementation, ORM features, back-end interfaces, web services, ASP .NET front-end and APIs for ease of usage. Generates deployable source code of software systems based on the system's entity model definition. The framework has been used in developing public safety, medical related, resource management, business intelligence and data analytics projects as well. Currently in use by constantly growing number of projects.
The framework has won Outstanding EVA Initiative Award in 2016 for greatly reducing development time and costs and improving software stability.

INTERN - RESEARCH ASSISTANT

School of Computing, National University of Singaore   Feb 2012 - Nov 2013

Responsibilities: Developing and evaluating tools and technologies that improve code maintainability and understandability in industrial software systems.
Implemented a technology (VCL, *Variant Configuration Language*), programming language and its compiler for applying adaptive reuse. The development was done in Java.
We demonstrated VCL's potential to reduce program complexity by eliminating redundant codes in a publication titled "Configuring Software for Reuse with VCL" which was published in an international conference (SPLST '13). We achieved 77.2% code reduction in the well-known Java Buffer Library by using VCL templates, making the code easier to read and enhance.
We conducted a case study using the linux kernel code and achieved a 61% code compression by refactoring cloned code instances into generic VCL templates. This allowed us to greatly enhance maintainability of the input driver code in linux kernel code.
The study later has been published with title: "Managing Big Clones to Ease Evolution: Linux Kernel Example" in an international conference (IEEE FEDCIS '16).

RESEARCH ASSISTANT - TEACHING ASSISTANT

Department of Software Engineering, University of Szeged, Hungary   Feb 2010 - Jan 2012

Teaching: Programming I (seminar)
Basics of Object- Oriented programming, Java programming language

Research Assistant (from June 2010)
Responsibilities: Evaluating software quality measurement practices, preparing software system quality reports using automated source code analysis and providing refactoring suggestions.
Java web-, desktop application and SOAP web-service development. Automated collection of information about software systems from various source code repositories and providing information about the current quality state of the system. Providing automated design pattern usage and refactoring option suggestions based on design faults and vulnerabilities in the systems.

EDUCATION

MASTER'S DEGREE
SOFTWARE INFORMATION TECHNOLOGY

Faculty of Science and Informatics, University of Szeged, Hungary   Sep 2011-Jan 2014
Thesis   : Towards Better Variability Management in Industrial Software Systems

BACHELOR'S DEGREE
SOFTWARE INFORMATION TECHNOLOGY

Faculty of Science and Informatics, University of Szeged, Hungary   Sep 2007-Jun 2011
Thesis   : Implementing a software which helps understanding structure of
software written in Java, C++ and C#

RESEARCH IN COMPUTER SCIENCE

Regional Scientific Students' Association Szeged 2013
Towards Better Variability Management in Industrial Software Systems

[2nd Prize]

Scientific Students' Association Budapest 2013
Towards Better Variability Management in Industrial Software Systems

SPLST 2013 - 13th Symposium on Programming Languages and Software Tools
Configuring Software for Reuse with VCL

FedCSIS - Federated Conference on Computer Science and Information Systems,
36th IEEE Software Engineering Workshop 2016
Managing Big Clones to Ease Evolution: Linux Kernel Example

OTHER PROFESSIONAL EXPERIENCE

ART (Adaptive Reuse Technology)

An open-source programming language and compiler which allows developers to manage software variability and write reusable code in general. ART (formerly known as VCL) replaces the need for many Variability Management Techniques with a single well-thought out mechanism that is simple, powerful and fully automated. The tool has over 200 downloads from various countries including the United States, Germany, Spain, Sweden, Russia, India, China, Thailand, Singapore and more. The tool is used for academic and business purposes as well. In example for generating and maintaining Android test codes, converting from XML descriptions to SVG graphics, generating RTF documents based on predefined templates, and generating complete web portal code as well. (http://sourceforge.net/projects/vclang)

SwipeTap

An Android input method developed to improve access to mobile devices for the elderly and people with disability. The application is designed to simplify hand movement and help in typing with lower precision. It provides text-to-speech, word prediction features and simple built-in text editor with all features being accessible with gestures without the need of locating buttons on the screen.
The application won 2nd prize in Startup Asia Singapore hackathon. (http://www.swipe-tap.com)
Currently is in testing phase on Google Play.

Food from the Heart SCC Portal

Food from the Heart (FFTH) is a non-profit voluntary food distribution programme in Singapore. FFTH supplies food and emotional nourishment to over 23,000 beneficiaries. Currently, there are 28 FFTH self-collection centres (SCC) island-wide, which help to support more than 4,000 needy beneficiaries by providing bread and non-perishable food items.
The project's objective is creating a web portal to address increasing operational need for FFTH to have better visibility, tracking and management of collections happening in various Self Collection Centres. The system provides real-time visibility of donations distributed and collected in various Self Collection Centres, prevent duplicate collections being made, and provide necessary data for decision-making. The portal provides the ability to manage self-collection centres, operators, beneficiaries, to plan distributions and track issuing of packages by scanning beneficiary ID cards with mobile phone.