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VASSIL MLADENOV

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EMPLOYMENT

Software Engineer, Intern — **National Instruments** — **Summer 2015**

Metrology Team, NI Calibration Framework

- Took ownership of part of the upgrade of mission critical software, crafted large-scale configuration database population tool using C# and Entity Framework
- Automated the migration of over 80% of legacy calibration procedures into the new software framework
- Guaranteed their functionality by writing an extensive, modular unit testing framework
- rewrote framework code in LabVIEW and TestStand to run legacy calibration procedures in new application
- Passed Certified LabVIEW Developer and Certified LabVIEW Associate Developer exams

Systems Engineer, Intern — **The Dow Chemical Company** — **Summer 2014 – Present**

- Developing Single Page Applications with ASP.NET MVC (C#, Javascript, HTML and CSS), Knockout responsive design
- Recreated an advanced formulation calculator as an SPA with a 2x speedup from a legacy Excel application
- Reduced 1200 lines of calculations to 400 with LINQ queries, authored unit testing toolkit to guarantee correctness
- Current project: reducing administrative workload by automating a manual user authorization process
- Working during school year as co-op

Hypergraphics Teaching Assistant, Student Mentor — **University of Illinois at Urbana-Champaign** — **Spring 2014 – Present**

- Mentor/TA to students for Python, OpenGL, VPython development in honors mathematics class (see HyperSnake)
- Head lab administrator for class: deployed lab upgrade, set up and maintaining server for class
- Teaching programming technologies (languages, editors, source control) to students with little CS background

EDUCATION

Champaign, IL — **University of Illinois at Urbana-Champaign** — **Class of 2017**

- Junior in Computer Science (Engineering), GPA: 3.78
- Chancellor's Scholar, Engineering James Scholar, Dean's List
- *Relevant Coursework:* System Programming; Algorithms and Theory of Computation; Programming Languages and Compiler Theory; Virtual Reality; Computer Security; Artificial Intelligence; Databases
- *Student Organizations:* ACM, HackIllinois, Reflections|Projections, Illini Table Tennis, Illinois Ski and Snowboard Club

TECHNICAL EXPERIENCE

Class, Organization, and Side Projects

- **Arduino LED music** (2015). Built an Arduino-controlled LED array that responds to music through both software and hardware FFT, and wrote a visualizer to display Arduino FFT results in Python and OpenGL
- **MeetU** (2015). Databases: developing a database-driven single-page web dating application that is exclusive to university students and designing an advanced matchmaking algorithm; Django, AngularJS, MySQL
- **HackIllinois** (2015). Worked on Systems team to develop official iOS app for HackIllinois 2015 in Swift
- **Exemplify** (2014). HackIllinois 2014 contestant: Developed working iOS Wikipedia-scraping application; Objective-C
- **HyperSnake** (2013). Created a four-dimensional analogue to the classic Snake game in Python and OpenGL and wrote documentation in LaTeX for an honors mathematics (Hypergraphics) course
- **VSMDesign** (2010-2012). Designed, developed, and marketed BlackBerry themes with SVG animation; gained experience in customer relations and raised money for the victims of the Haiti and Japan natural disasters.

Languages and Technologies

- **Top:** Visual C#, Java, JavaScript, Python; **Worked with:** C, C++, OCaml (subset, compilers), HTML5/CSS, LabVIEW, Objective-C, SQL, OpenGL, LaTeX, Mathematica; **Hobby:** Swift, Arduino, Bash, Haskell
- **Frameworks:** ASP.NET MVC, jQuery, Durandal, AngularJS, Knockout, Node.js
- Sublime Text, Visual Studio, InteillJ IDEA, Eclipse, TestStand, SVN, Git, TFS, GDB, Adobe Photoshop, Vim
- **Spoken Languages:** Bulgarian, English, Spanish