UNLV | HOWARD R. HUGHES COLLEGE OF ENGINEERING

CAPABILITY STATEMENT: SOFTWARE ENGINEERING

UNIVERSITY OF NEVADA, LAS VEGAS, HOWARD R. HUGHES COLLEGE OF ENGINEERING

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OVERVIEW

The University of Nevada Las Vegas (UNLV) supports planning, designing, and developing scalable software and studying the software engineering process in practice. This includes state-of-the-art empirical methods for analyzing and diminishing costs in situ. Our capabilities encompass the ability to help with software development and its support systems.

RESEARCH CAPABILITIES

Software Engineering

UNLV's College of Engineering ***Software Engineering and Media*** laboratory has expertise in:

1) Analytics for studying individual or team behavior in situ,
2) Empirical studies on productivity, and
3) Software development in practice.

Broadly, the lab evaluates possible contributors to costs related to wages, training, or other crucial factors. For example, common interests are the impact on time/wages from competing programming language designs, training methods, testing procedures, or other topics. The lab contains software and hardware resources for conducting and analyzing these procedures.

Programming Languages

One area of particular expertise at UNLV is evidence-based programming including the study of competing programming technologies and their impact on developers in practice. Specifically, we have demonstrated research on big picture impacts. This includes the design of competing concurrency techniques, differences in type systems, and impacts of language structure, all of which have been shown to have precipitous productivity impacts in time and in other ways (e.g., program faults).

Education, Accessibility, and Human Factors

Modern scientific disciplines outside of computer science rely heavily on computer systems for completing their work. UNLV is a leader in helping those with disabilities join computer science as part of this broader movement. Our expertise includes:

1) Learning methods and techniques,
2) Accessibility technologies, and
3) Educational analytics.

PAST PERFORMANCE

NASA, National Science Foundation