**Supplemental Digital Content 11** - Sensitivity analysis: Performance of Optimized Postoperative Deterioration Prediction Models with Varying Temporal Gap Windows, Test Set

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| **Prediction Model** | **AUC (95% CI)** | **Positive Predictive Value**  **(95% CI)** | **F1 Score (95% CI)** | **Sensitivity**  **(95% CI)** | **Specificity**  **(95% CI)** |
| Gap Window = 30 minutes | | | | | | |
| Naive Bayes | 0.602 (0.593-0.611) | 0.336 (0.326-0.346) | 0.429 (0.423-0.435) | 0.661 (0.631-0.691) | 0.542 (0.498-0.587) |
| Learning Using Concave and Convex Kernels | 0.753 (0.748-0.757) | 0.44 (0.432-0.448) | 0.528 (0.524-0.533) | 0.68 (0.666-0.693) | 0.721 (0.708-0.734) |
| Random Forest | 0.752 (0.748-0.755) | 0.444 (0.436-0.453) | 0.524 (0.52-0.528) | 0.658 (0.645-0.671) | 0.733 (0.719-0.747) |
| Support Vector Machines | 0.716 (0.71-0.722) | 0.411 (0.404-0.419) | 0.506 (0.501-0.512) | 0.674 (0.661-0.688) | 0.689 (0.673-0.706) |
| Gap Window = 60 minutes | | | | | | |
| Naive Bayes | 0.586 (0.576-0.597) | 0.326 (0.315-0.337) | 0.432 (0.426-0.438) | 0.729 (0.696-0.761) | 0.451 (0.4-0.502) |
| Learning Using Concave and Convex Kernels | 0.698 (0.694-0.702) | 0.406 (0.398-0.414) | 0.486 (0.483-0.489) | 0.628 (0.613-0.643) | 0.693 (0.677-0.709) |
| Random Forest | 0.703 (0.699-0.707) | 0.383 (0.376-0.39) | 0.486 (0.482-0.489) | 0.683 (0.669-0.697) | 0.636 (0.619-0.652) |
| Support Vector Machines | 0.666 (0.659-0.673) | 0.384 (0.375-0.392) | 0.47 (0.465-0.475) | 0.632 (0.615-0.648) | 0.657 (0.633-0.68) |
| Gap Window = 120 minutes | | | | | | |
| Naive Bayes | 0.586 (0.578-0.593) | 0.301 (0.292-0.309) | 0.408 (0.404-0.413) | 0.718 (0.687-0.749) | 0.452 (0.407-0.497) |
| Learning Using Concave and Convex Kernels | 0.682 (0.679-0.686) | 0.384 (0.375-0.392) | 0.461 (0.458-0.464) | 0.609 (0.591-0.626) | 0.693 (0.675-0.711) |
| Random Forest | 0.693 (0.689-0.697) | 0.369 (0.361-0.378) | 0.465 (0.461-0.468) | 0.657 (0.64-0.674) | 0.649 (0.629-0.668) |
| Support Vector Machines | 0.665 (0.659-0.671) | 0.402 (0.392-0.411) | 0.461 (0.457-0.466) | 0.569 (0.553-0.586) | 0.728 (0.706-0.75) |
| Gap Window = 240 minutes | | | | | | |
| Naive Bayes | 0.587 (0.583-0.592) | 0.282 (0.278-0.286) | 0.399 (0.396-0.402) | 0.705 (0.688-0.723) | 0.481 (0.458-0.505) |
| Learning Using Concave and Convex Kernels | 0.674 (0.668-0.679) | 0.34 (0.334-0.345) | 0.444 (0.44-0.449) | 0.66 (0.645-0.675) | 0.63 (0.615-0.645) |
| Random Forest | 0.668 (0.662-0.673) | 0.339 (0.331-0.347) | 0.438 (0.433-0.442) | 0.652 (0.634-0.67) | 0.619 (0.596-0.643) |
| Support Vector Machines | 0.637 (0.63-0.644) | 0.337 (0.33-0.345) | 0.428 (0.423-0.433) | 0.618 (0.599-0.637) | 0.636 (0.609-0.662) |
| Gap Window = 480 minutes | | | | | | |
| Naive Bayes | 0.557 (0.549-0.565) | 0.255 (0.247-0.263) | 0.354 (0.349-0.359) | 0.673 (0.639-0.706) | 0.482 (0.434-0.529) |
| Learning Using Concave and Convex Kernels | 0.708 (0.705-0.711) | 0.336 (0.329-0.342) | 0.428 (0.425-0.431) | 0.617 (0.601-0.634) | 0.703 (0.687-0.718) |
| Random Forest | 0.709 (0.705-0.712) | 0.339 (0.331-0.346) | 0.434 (0.43-0.438) | 0.631 (0.614-0.647) | 0.698 (0.682-0.714) |
| Support Vector Machines | 0.677 (0.671-0.682) | 0.346 (0.339-0.353) | 0.429 (0.425-0.433) | 0.584 (0.57-0.598) | 0.73 (0.714-0.747) |
| Gap Window = 720 minutes | | | | | | |
| Naive Bayes | 0.624 (0.618-0.629) | 0.28 (0.274-0.286) | 0.38 (0.376-0.384) | 0.629 (0.61-0.649) | 0.636 (0.617-0.655) |
| Learning Using Concave and Convex Kernels | 0.702 (0.698-0.706) | 0.301 (0.296-0.305) | 0.411 (0.408-0.415) | 0.671 (0.655-0.686) | 0.656 (0.642-0.669) |
| Random Forest | 0.694 (0.69-0.698) | 0.304 (0.298-0.311) | 0.405 (0.402-0.408) | 0.636 (0.619-0.653) | 0.674 (0.658-0.689) |
| Support Vector Machines | 0.675 (0.669-0.68) | 0.316 (0.31-0.321) | 0.411 (0.407-0.416) | 0.606 (0.593-0.619) | 0.709 (0.697-0.721) |